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WEEKLY

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Vol 5 No 14

40 Rock C send 4

Concern grows over long software delays

CONCERN is growing among software companies, retailers and consumers abut the large number of computer releases being severely delayed, often after being heavily advertised in the press

Well-known companies such as Ocean (with *Superbowl* Spectrum – *Knight Rider*, *Street Hawk*, *Batman* and *V*), Melbourne House (*Asterix*, *Whitbread Yacht Race*), Firebird (*The Comet Game*), US Gold (two Ultimate titles and *Legend of the Amazon Women*) and Quicksilva (*Max Headroom*) are all behind schedule for long-awaited titles.

Ocean's five titles were all due to be released before Easter As Ocean plans to release about 80 new products this year alone, a heavy backlog is being created

"The problem is only partly because of the number of titles," said Ocean's managing director Jon Woods "The Spectrum version of *Superbowl* is now out, but I have no news on *Knight Rider* or *Street Hawk* – they're not finished. *Batman* is completed and will appear soon, *V* will be out this week "

All these titles have been promoted in advertisements by Ocean, *Knight Rider* since December 1985

As for Melbourne House's *Asterix*: "We've postponed it

continued on page 4 ▶

HEAVY on the Magick, the *innovative new animated role playing adventure from Gargoyle Games is close to completion*

The game is based on the well-known Dungeons and Dragons format, but each event in the game is illustrated graphically

Gargoyle has created graphic techniques which have enabled it to incorporate 250 rooms and a variety of animated monsters

In true D&D fashion, the player can invoke a wide range of spells throughout the play Success is also partly determined by your skill/stamina rating See this week's New Releases for a more detailed look.

Heavy on the Magick *will be released within the next three weeks at £9.95 on the Spectrum. Amstrad and Commodore versions will follow*

THIS WEEK'S NEWS

- Apple dismisses Amiga and ST threat as profits triple
- Amiga price reduced in US
- Spectrum 128 incompatibility – the numbers graw

INSIDE) NEW LOW-COST 1200 CITIZEN PRINTER REVIEWED—P9)


QUESTPROBE
FEATURING
THE HUMAN TORCH
AND THE
THING
SCOTT ADAMS
Can you control the awesome powers of two Marvel Super Heroes at the same time and rescue Alicia Masters from the grip of the evil Dr Doom? In this the third of the highly acclaimed Questprobe series, written by Scott Adams, the undisputed master of the art of adventure writing, you have to control both The Thing and The Human Torch in their mission, set by the Chief Examiner, to rescue Alicia Masters from
All American ADVENTURES
AMSTRAD DISK £14.95 CASS. £9.95
SPECTRUM 48K CASS. £9.95
ATARI DISK ONLY £14.95
BBC/ELECTRON (TEXT ONLY)

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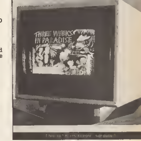
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EDITORIAL

The problem of delayed software releases is hardly a new one. It is every bit as well-known and exasperating as that computing cliche, the delayed micro launch. What is worrying about the current spate of postponements and excuses is that everyone seems to agree that the delays are getting worse.

This Easter we reached a point where most of the country's top software companies were fighting a losing battle to release their products exactly one week before the Easter holidays. Most will end up not reaching the shops until some time after. In doing so, they have left the opportunity for sales open to products like Gremlin's *Way of the Tiger* and Hewson's *Uridium*, whose companies were sensible enough to give themselves a bit of leeway.

The companies concerned seem to be convinced that there is a glittering "Easter market" (say, a slightly poorer relation of the Christmas market) where a strongly advertised title will do wonders for company profits.

I remain doubtful, particularly when these products miss Easter by a good week, all appear together in a bunch, and compete together well after the scheduled time.

The other worrying point, and probably more important, is an ethical one. Many products are advertised well in advance of their release date.

Consumers become frustrated if a product, advertised as available, is nowhere in sight. It is surely reasonable to expect an advertised product, whether a computer game, record, microwave oven, or garden spade, to be available then, unless of course the advertisement says "available soon", or similar.

Of course, there are a large number of threads to pull together in the production of a software title: storyboarders, programmers, designers, artists, typesetters, blank tape manufacturers, duplicators, distributors ... (the list is endless) all need to be co-ordinated. It would be asking the impossible for every release date to be made.

But one thing is certain, delays hurt everyone. The software companies lose money and credibility, the distributors likewise, the retailers lose money and gain angry customers and the consumers lose interest.

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ABC

Computer Trade Association Magazine of the Year

Commodore drops US Amiga price

COMMODORE has just begun a special promotional offer on the Amiga – in the US. Until May 31, the Amiga will retail at $1295 (about £900), for a package comprising the 256K, single disc computer and a colour monitor. This is $500 less than its previous price.

"Our intention is to rapidly build up the hardware base – there is now a lot of software available for the Amiga. As we build up the owner base, so more companies will write for the machine," said Paul Lazovick, of Commodore International.

Lazovick estimated the Amiga's software base at over 100 titles, with 400 more being currently written.

He denied that the drop in price was in order to compete directly with Atari, whose 1040 STF sells for just under $1000 (about £700). "I can't say that the move is to compete – the Atari is not a strong competitor," he said.

It is possible that this offer may become permanent if it is successful. "I can't project what will happen," Lazovick continued. "At the moment it is scheduled to finish at the end of May."

Unfortunately, this move in the US will not help to reduce the introductory price of the UK's 512K Amiga at £1500.

Apple dismisses Amiga and ST threat

APPLE is alive and kicking – and unimpressed by any threat to the Mac posed by Amiga and Atari's ST.

Apple's chairman, John Sculley, in Cambridge for the first conference of the Apple University Consortium, delivered this confident message following the announcement of Apple's financial results in the three months to March 28.

Profits have more than tripled over the comparable period in 1985 to $32 million (about £21 million), a performance in the computer field matched only by Amstrad's excellent results announced in February.

The current picture contrasts sharply with the situation six months ago during the highly acrimonious departure of founder Steve Jobs.

Sculley dismissed competition from the ST and Amiga, saying that the future of mainstream personal computing lay in two architectures – the IBM PC and the Macintosh. He quoted software developers, including world leader Microsoft, as denying support to the new machines and said, "We know there's going to be very little development."

In fact, both Commodore and Atari themselves have lent support to this view, Commodore announcing an IBM emulator at the Amiga's launch, while Atari has introduced a CP/M emulator and announced an IBM emulator.

Oddly enough, Apple-watchers in the US are predicting an upgrade of the Apple II series as an answer to the Amiga/ST thrust. The *San Francisco Examiner* says the new machine will include a 16-bit processor and offer Apple II compatibility by including a IIc on a single chip. Pricing should be under $1,000 and a launch is expected in September.

Meanwhile, at Cambridge, attention was focused on Apple's moves in the education field. The three-day conference showed that Apple is serious about this market.

More than 200 delegates from universities in 37 countries attended to appraise the current role of the Macintosh as an educational machine. Hundreds of software packages are available, most developed by the universities and much of it comfortably up to commercial standard.

Software delays

◄ continued from page 1

until June,' said Paula Byrne. But the Whitbread yachting simulation has been cancelled.

Firebird's *Comet Game*, due to coincide with the space probe Giotto encountering Halley's Comet, has also only just appeared. "We had problems with duplication," said Firebird's Phil Pratt. "Delays are a problem – I wish I knew the solution."

US Gold is encountering problems with its titles Ultimate, *Pentagram* and *Cyberun*. But the company's general manager, Tim Chaney, said this was not a delay, although the games were originally due to be released in February. "It's simply a question of when the market is right. We need to space our releases out. *Cyberun* should be out in the second week of April and *Pentagram* soon after that."

Delays have occurred, however, on *Legend of the Amazon Women*. "We had to send the Commodore version back for more work on it."

Max Headroom, from Quicksilva, is another casualty. "There were a couple of hold-ups, and a delay of one day at one end can mean a week at the other," said Quicksilva's Jane Smith. *Max* should be out this week.

However, distributors, who deliver the products to the shops, are extremely concerned, and say the problem is increasing.

Dave Cahill, buyer at Micro Dealer, commented, "It causes great problems. Instead of a steady progression of titles, you're getting the whole batch at once, this makes a limited market and everyone sells less. The situation has got much worse recently."

For the retailers, John Greengrass of Boots, said, "It's been a perpetual problem – software houses are very keen to get publicity and then they run into development problems."

Spectrum 128 incompatibility — more details

MAIL order software dealer Speedysoft has compiled a list of Spectrum odes it has tested (71 in all) for compatibility with the Spectrum 128.

So far, Speedysoft claims that the following programs in their current form will not work on the Spectrum 128: *Alien 8* (Ultimate), *Elite* (Firebird), *Enigma Force* (Beyond), *Fairlight* (The Edge), *Four Adventures* (Global), *Hypersports* (Imagine), *Impossible Mission* (US Gold), *Knight Lore* (Ultimate), *Movie* (Imagine), *Laser Basic* (Ocean), *Laser Compiler* (Ocean), *Macadam Bumper* (PSS), *Nick Faldo's Open* (Mind Games), *Nightshade* (Ultimate), *Now Games*, *Now Games 2* (Virgin), *Steve Davis Snooker* (CDS), *Spitfire 40* (Mirrorsoft), *Swords and Sorcery* (PSS), *Their Finest Hour* (CCS), *They Sold a Million* (Hit Squad), *Think!* (Ariolasoft), *Tomahawk* (DI), *Waterloo* (Lothlorien), *Winter Games* (US Gold) and *Way of the Tiger* (Gremlin).



Alien 8 – not 128 compatible

Speedysoft stresses that it has not tested every Spectrum program ever released. The list refers to current versions, many software houses are working on 128 versions of previously non-compatible games.

Further information from Speedysoft, 37 Church Road, London SW13 (01-846 9353).

Amstrad show alteration

DATABASE Exhibitions has changed the date of the next Amstrad Computer Show in London. The show will now be held, still at the Novotel venue, on June 13, 14 and 15.

Database claims the alteration is due to "overwhelming demand" and that the show will now take up double the floor space previously allocated.

Off the Hook compilation out now

OFF the Hook, the charity compilation tape in aid of the Princes Trust is now on sale for the Spectrum and Commodore machines at £6 99

"By the end of the first week, I would expect to have shipped 20 000 units," said Rod Cousens organiser of the *Off the Hook* appeal

Unfortunately, Cousens was unable to get Pete Townshend, the former Who guitarist to endorse the tape with an audio message, but he is still hoping he will participate in the appeal, to raise funds to help drug addict rehabilitation

"Now I'm working on getting versions out for the Amstrad, Atari, BBC and C16 – I'm about 80% through the task," said Cousens

Colossal title from Level 9

IN addition to its forthcoming *Price of Magik*, Level 9 will also launch its biggest adventure at the end of May

Called *Colossal Trilogy*, it is a version of the original mainframe *Colossal Adventure*, with graphics added, extra text and a full sentence parser Available on disc for the PCW 8256 and Atari ST it will also be released on microdrive for the Sinclair QL

Level 9 plans to bring out *Colossal Trilogy* at £19 95

Melbourne's latest

MELBOURNE House's next release is scheduled for the end of April – a text and graphic adventure entitled *Red Hawk*

The game features cartoon-style graphics in the form of a comic strip, and tells the story of Kevin, "a sort of Superman in reverse", according to Melbourne House's Paula Byrne

The company plans to release *Red Hawk* simultaneously on Spectrum, Commodore 64 and Amstrad machines at £8 95

Monitor interface for Commodore 128

CASCADE Games has come to the rescue of new Commodore 128 owners who also possess a Microvitec monitor

Cascade has developed an interface, which can provide an 80 column RGB display for the C128, via the RGB TTL input used on most Microvitec models, including the 1431 dual model monitor Users will be able to switch between using 40 columns on the Commodore 64 to both 40 and 80 columns on the 128

The interface will cost £19 95 Details from Cascade at Suite 4 1-3 Haywra Crescent, Harrogate, North Yorkshire (0423 504526)

Micro vacuum cleaner

IF your computer is looking a bit dusty, the Mini Vac may be the answer

Mini-Vac is a battery operated, hand held vacuum cleaner, about the size of a hair dryer, with a small dust-bag and two pipes and brushes

Manufacturer Authenticity says the Mini-Vac is not just for micros, but also camera lenses, hi fi systems and video equipment

The Mini Vac will cost £11 95 More details from PO Box 34E, Worcester Park, Surrey (01-337 3352)

PCW 8256 Chess

AMSTRAD's software department, Amsoft, will release *Cyrus II Chess* for the PCW 8256 and 8512 machines next week under its Amsoft Gold label.

Cyrus II Chess offers 12 playing levels, and it will also play against itself. You may play the game in either 2D or 3D, and can print out screens at any stage, or a complete record of a particular game

Cyrus II Chess for the PCW machines will cost £13 95

Letters

QL enthusiasts

Myself and a handful of other QL enthusiasts have got together to form the Mid-Cheshire QL User Group We intend to meet fortnightly in Crewe, and would like to hear from any prospective members

I would be grateful if you could publish my full name, address and telephone number, so that anyone interested can write or phone for further details

D E Whittick
72 South Street
Crewe
Cheshire
Tel. (0270) 255753

A vendetta?

I refer to Mr Hartley's letter, Vol 5 No 10, in which he states that your criticism of the BBC Master Series was unjustified

In the same issue I noticed that the Peek & Poke column also contained derogatory references towards the Acorn Electron. It stated that "it offers little in the way of cheap upgrade potential" and there is no "vast software base" available

This is complete and utter nonsense If your writer took the time to fully investigate the software and expansion potential of the Electron, he would discover, four DFSs and Advanced Computer Products forthcoming AP5 interface, giving enhanced BBC compatibility, offering a User Port, 1 Mgz Bus and the Tube, allowing Acorn's 6502 and Z80 second processors to be attached Rom expansion boards, a communications package, speech synthesiser touch tablet, trackball satellite comms and even a Winchester hard disc drive These are just a few of the peripherals, readily available to the Electron user, all at prices equivalent to similar systems currently on the market

As far as software and firmware is concerned, there is a multiplicity of serious applications firmware available and the majority of titles currently being released for the BBC also have an Electron counterpart *Beach Head*, *Citadel*, *Repton 2* and *Karate Combat* are just some of the very latest titles to appear from quality software houses such as US Gold and Superior Software

The Electron is very much alive and every month sees new life breathed into it The scathing criticism applied to the Electron and the BBC Master Series leads me to believe that *Popular* is conducting some kind of petty vendetta against Acorn, which can only do irreparable damage to a company in the forefront of the British micro-computing industry

Stuart Low
Alloa
Scotland

CORRECTION

If you're thinking of ringing up the CCCBB (Calne Computer Club Bulletin Board) please note that the correct number is 0249 817077.

Joystick details

I have recently bought a Rempston type interface and joystick for my 48K Spectrum While this works well on appropriate commercially available games, I have been unable to find any useful information on how to use this equipment in my own programs

Could anybody please supply me with details of how to read and include the joystick inputs, instead of the *Inkey* commands for up, down, left, right and fire?

K Cockburn
Hall Lane
Houghton-le-Spring
Tyne and Wear

In business

Further to the letter which appeared in *Popular*, 5 March, in the Arcade Avenue section, I would like to take this opportunity to straighten the record

The reader in question was looking for advice on how to complete *Chuckie Egg II* from A 'n' F Software The reader appears to be of the opinion that A 'n' F Software have "gone out of business".

Indeed one of our telephone lines has been converted to a mail order and queries number and this should alleviate any further difficulties I would ask everyone to please note that A 'n' F Software are fully operational from their normal address at Unit 8, Canalside Ind Estate, Woodbine Street East, Rochdale Lancashire, and can be contacted at any time on 0706 341111

If your reader would therefore call us, we will do all we can to help

A 'n' F Software

Not approved

I noticed with interest your hardware article in Vol 5, No 8 You state that Modem House's Voyager 7 is "not yet fully approved, a familiar story of red tape and backlogs"

I feel I should mention that the non-approval of the Voyager 7 has little to do with red tape and backlogs, in fact, Modem House has not even applied for approval of this modem.

I hope this will help paint a truer picture of the situation in respect of this modem.

Malcolm Clifton
Office of Telecommunications

The Gallup Charts take an Easter break this week

Readers' Chart No 68

1	(1)	Elite *(Spectrum/C64/Amstrad/BBC)*	**Acornsoft/Firebird**
2	(4)	Movie *(Spectrum)*	**Imagine**
3	(5)	Lord of the Rings *(Spectrum/C64/Amstrad)*	**Melbourne House**
4	(2)	Yie Ar Kung Fu *(Spectrum/C64/Amstrad/BBC)*	**Imagine**
5	(10)	Uridium *(C64)*	**Hewson**
6	(9)	Swords and Sorcery *(Spectrum/Amstrad)*	**PSS**
7	(3)	Commando *(Spectrum/C64/C16)*	**Elite**
8	(7)	Spellbound *(Spectrum/Amstrad)*	**Mastertronic**
9	(5)	Winter Games *(Spectrum/C64/Amstrad)*	**Epyx/US Gold**
10	(–)	FA Cup Football *(Spectrum/Amstrad)*	**Virgin**

Winning Phrase No 68 "Andy'n'Fergie make it – oo!", from A Newby, of Harrogate, North Yorks, who wins £25 An honourable mention goes to M G Crawford, also of Harrogate, and with the same theme in mind (everyone wrote anagrams about That Couple this week), for, "Andy met Fergie – Koo calm"

Now voting on week 70 – £25 to win

Each week *Popular* is compiling its own special software top ten chart – compiled by YOU

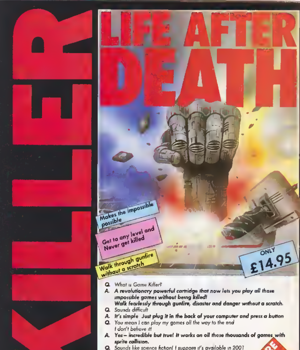
And each week we will send £25 to the person who sends in with their chart votes, the most original (witty, neat or clever – but never rude) phrase or sentence made up from the letters (you don't have to use them all) in the titles of the top three programs in this week's Readers' Chart published above

You can still vote in the chart without making up a slogan – but you won't be in with a chance of winning the prize

All you have to do is fill in the form below (or copy it out if you don't want to damage your magazine) and send it off to Top 10 *Popular Computing Weekly*, 12-13 Little Newport Street, London WC2H 7PP

Voting for Week 70 closes at 2pm on Wednesday April 9, 1986 Entries received after that time will not be eligible for inclusion in that week's voting The judges decision is final. Only one entry per individual per week will be allowed.

Name .... **My top 3: Voting Week 70**
Address .... 1................................
.... 2................................
.... 3................................
My phrase is: ....



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Hardware

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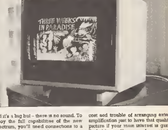
Product *Chroma 1 Monitor* **Micro** Spectrum 128/QL (tested), Spectrum 48K (with converter Amstrad, BBC, Atari, Commodore 128 **Price** £229.95 (introductory price) **Supplier** Chromagraphica, 135 Cliff Road, Hornsea, N Humberside HU18 9SZ

My first impression of this monitor was amazement. It's housed in a wooden case! A type of chipboard, to be precise, with a spray painted finish. Chromagraphica supplies the monitor in a number of colours to suit your micro Sinclair black, Acorn yellow, or pale grey for Atari and Commodore 128.

Chromagraphica also plans to make a metal cased version (more expensive) for those wanting a shielded box

The Chroma 1 has an on/off switch and brightness controls, plus, on my model, an eight hole plug suitable for the Spectrum or QL socket Other versions come with relevant connections and there is promise of a 48K Spectrum model, with interface for £28.95

Plugging in gives favourable results Chroma 1 gives a markedly better image than the TV/monitor I normally use The picture was crisp and clear but –



and it's a big but – there is no sound. To enjoy the full capabilities of the new Spectrum, you'll need connections to a separate amplifier which are not satisfactorily explained in the 128 manual. Chromagraphica is, again, planning a version with sound output.

I'd advise careful thought before buying this version, even at the initially competitive price. Can you justify the cost and trouble of arranging external amplification just to have that quality of picture if your main interest is games? Probably not However, if you use your micro for tasks where fine definition is imperative, then it could well suit you.

No price has yet been fixed for the more enhanced versions, but they may well be worth waiting for

John Minson

Citizen 120D

Product *Citizen 120D dot-matrix printer* **Micro** Any with Centronics output, interfaces for RS232 and CBM serial also available **Price** £235 **Supplier** Citizen Europe Ltd, Wellington House, 4/10 Cowley Road, Uxbridge, Middlesex UB8 2XW, Tel 0895 72631

There are two fields in which a printer must appeal to the enthusiastic home user to become successful – facilities, economy and ease of use ... *three* fields in which a printer must appeal – facilities, economy, ease of use and reliability ... *four* fields ... Oh well, suffice it to say that the newly-released Citizen 120D seems to have something to offer in every field

Major manufacturers have recently realised the value of a budget printer designed to appeal to the mass market In some cases this realisation leads to shortcuts in quality (thermal printing, lack of font options and so on), but with the 120D there seems to be no such limitation.

The 120D is certainly good enough for the home user wishing to produce program listings and fair quality correspondence, and may well be sufficient for a small business In order to make it compatible with the wide range of micros this would involve, the 120D has a port in the righthand side which accepts an interface cartridge specific to the computer you own

The 120D is compact – 366 × 240 × 90mm, lightweight, and seems well-made A number of the design features make it ideal for the home user it has a tractor-feed included, with continuous paper feed from the lower rear to save space

Print speed is fair, at 120 cps in normal mode or 25 cps in near-letter quality mode There is also a large number of font options, Pica or Elite, expanded, compressed, or both The 9 × 9 dot matrix print head allows underlining, and full IBM or Commodore graphics printing

The ribbon, which has a life expectancy of two million characters (we didn't test this!) is of the disposable cartridge variety and is easy to replace

The front panel controls include online, form feed/sheet load, and line feed. LEDs indicate power on paper out, and ready There's a built-in 4K buffer.

The tractor feed clips easily over the platen, and the platen knob is on the right-hand side in front of it is the all-important interface cartridge slot Using a standard Centronics cartridge, you can of course use any micro equipped with a Centronics interface The 120D will emulate an Epson FX printer (1, 2 or 3), according to how you set the DIP switches inside the interface cartridge

Users of Commodore micros with the company's non-standard serial output will be aware of the problems in using non-Commodore printers In the case of the 120D, you will need a serial interface cartridge which connects to the micro with the usual CBM serial leads However, this cartridge will not be available for a couple of months so unless you already own a Centronics interface for the 64/128 you will have to wait

The manual for the 120D is a very complete, ring-bound affair, which goes into fair detail about maintenance, programming and options, though it is a little sketchy on Commodore Basic printer commands

In all the 120D, at £235, seems to offer an excellent alternative to bulky expensive business printers or inexpensive but limited models When the Commodore serial interface is launched it will probably compete well with the forthcoming CBM MPS-1000

Chris Jenkins

Foresight

Program *Fourmost Adventures* **Micro** Spectrum/*Amstrad* **Price** £7.95 **Supplier** Global Software, PO Box 67, London SW11

Any compilation of Adventures compiled by Tony Bridge must be worth taking a look at. The games are an unusual collection but it's easy to see why the selections have a place in this compilation.

The three adventures and one role playing game are very good value for money. The first, *Out Of The Shadows* is a typical role player with the usual assorted monsters to overcome. You are able to decide, at the beginning, which of six quests to take part in, then off you go to explore the area. If you have never played this type of game before it is a good introduction to the game.

Galaxias is one of Fergus McNeil's earlier *Quill*ed adventures (later games were *Bored Of The Rings* and *Robin Of Sherlock*), in this game the idea is to visit various planets in search of a Crystal. Apart from the stencil-type text which takes a bit of getting used to, the game, overall, is very enjoyable with good location descriptions and reasonable graphics.

The Mural by Nic Ford finds you wondering along Neasden High Street when you are approached by a couple of guys wearing suspenders. Strange you may think but this game is certainly different from others I have played. The object is to find an obscene mural and paint over it. I don't know if the author intended it but there is a certain *Zorkish* feeling to the game.

The last game, and one that I particularly wanted to look at, unfortunately would not load, entitled *Project X – Micro Man*. From what I know of it, the adventure is not unlike *The Incredible Shrinking Man*.

In conclusion then, for any adventurer who likes variety this is an excellent package and represents good value.

Roger Garrett

Da Boss

Program *Mugsy's Revenge* **Micro** CBM 64 **Price** £8.95 **Supplier** Melbourne House, 60 High Street, Hampton Wick, Kingston-upon-Thames, Surrey KT1 4DB

Ok Mugsy dis is da lowdown on what's bin 'appening since yuv bin in da slammer, da Feds 'ave made booze illegal an dis is a great chance for us ta clean up by smuggling some moonshine in from Canada, whadda ya tink boss?

You may have guessed that this is the follow up to the successful *Mugsy*. Having just been released from jail it's up to you to regain your rightful position as the underworld king. This involves buying barrels of booze at the right price, opening nightclubs, putting out 'contracts' on gangsters and keeping the police 'sweet'.

One of your loyal hoods will keep you informed of when to buy booze, nightclubs, enlist men etc, but it's up to you what decisions are made and making the wrong ones can be disastrous.

The game combines strategy with an arcade sequence, in which you get a chance to blast away with your joystick. The game on first playing is entertaining enough, graphics are excellent, well defined and quickly drawn, the music reminds one of the roaring 20s era and tinkles along quite merrily. But, I don't think good graphics and jolly music will alter the fact that, after playing the game for a while, it does tend to get a bit stale. The management/strategy elements are fundamentally weak – as they were in *Mugsy*.

Granted, it's a great way of making the old *Kingdom* look good and I'm certain a lot of people will buy it on the strength of its graphics, my own feeling is that *Mugsy* should have been left in jail.

Roger Garrett

Knock out!

Program *King of the Ring* **Micro** Atari 8 bit **Price** £8.95 **Supplier** Gremlin Graphics, Alpha House, 10 Carver Street, Sheffield S1 4FS

I suppose this can best be described as boxing's version of *Football Manager*. There you are, with your budding protegé eager to break into the big time, all he needs is a few good wins under his belt and it's a shot at the world title. So it's up to you as his manager and coach to pick out the right fighters for your boy to go up against, know wot I mean Harry?

This is your big chance to prove that your're better than Mickey Duff when it comes to tactics and training (you get to choose various types) and then it's down to the fight itself. This takes the form of what looks like a couple of shadow boxers in outline, ducking and weaving and hitting, over eight rounds. All you can do is sit and watch whilst your boy either takes punishment or dishes it out. In between rounds you decide on whether to attack, defend or just play dirty, (which, I must admit was my best ploy). If you feel that the fight is going well, you can elect to go for a KO option which is a gamble and could backfire by getting your boxer KO'd.

Choosing an opponent is interesting as you get a complete case history of each one and it's from this record that you can pick out a likely fall guy. It's nice to see some quality 8 bit Atari software being released now and Gremlin have made a good job with this one, I'm over the moon Harry!

Andy Moss

Team spirit

Program *Team Mate* **Micro** CBM 64/Atari **Price** £34.95 **Supplier** Team Mate, Debden Green, Saffron Walden, Essex CB11 3LX.

This is a package from American software house Tri Micro and released here by Team Mate Software in Essex. It is a suite of four programs: Word Processor, Data Base, Graphic and Spreadsheet – integrated as a single system.

The Word Processor – has all the usual commands available – editing, variant margins, justifying, swapping or replacing blocks of text, etc., and the printer commands include centering, shadow or bold printing, super and subscript. The screen format is 80 column but, because your screen is only 40 columns wide, the program splits your text into two halves and by pressing F7 or F8 enables you to see the right and left halves respectively.

The Spreadsheet – consists of 50 rows and 17 columns giving you 850 cells to hold numbers or formulae, quite enough to work out budgets or taxation or even your mortgage repayments. Once again, screen size demands a splitting up of cells but a single key pressing scrolls neatly through the data.

The Graphics – include pie, bar and line charts which although provide clear and concise diagrams, tend to look a little inferior when compared to say a graphics only utility.

Lastly comes the **Database** which allows you to store all sorts of information from mailing lists to house inventories!

You can hold up to 999 records with a maximum of 17 lines or 'Fields' for each.

All of these programs can be used in conjunction with each other and printed out using the Word Processor/Printer set up. There are some nice error trapping routines and a choice of 16 colours to suit your mood.

Andy Moss

Mixed bag

Program *30 Games* **Micro** Spectrum 48K **Price** £9.95 **Supplier** Argus Press Software Ltd, Liberty House, 222 Regent Street, London W1R 7DB

Games, games, lovely games! Gather round because have I got games for you. Not ten. Not 20! Thirty! Count 'em.

There have been compendiums before but few like this, an inevitably mixed bag of the good, the bad and the repulsive games you thought you'd never see the likes of again; relics and remains from computing prehistory (ie. four years ago) like a tarted up *Battleships* game masquerading as a wargame, *Draughts* and a *Computer Cube*.

But while these are fillers, not thrillers, Argus have been able to draw on all the outposts of their surprisingly vast empire to produce some good stuff. Recent releases like *Strontium Dog – the Killing* may not have gathered much respect at full price, but at just over 30p you can't grumble. And at this price *Fantastic Voyage* and *Mighty Magus* are definite bargains. It's also interesting to see how well a title like CS dominate the wargame market and *Antics* has lasted and even *Space Invaders* can provide a welcome respite from the sophistication of today's icon driven wonders. I was also fascinated by *Dragonsbane*, a sort of predecessor to *Swords and Sorcery*.

30 Games provides a great selection of game types – a real lucky bag of style and quality. Unless you already have the best ones you won't go far wrong – a tape counter is vital though.

John Minson

Sea dog

Program *Devil's Crown* **Micro** Spectrum 48K **Price** £1.99 **Supplier** Mastertronic Ltd, 8-10 Paul St, London EC2.

Pin back yer lug'oles for a narrative of nautical nastiness. It seems there was this pirate ship which found the Devil's Crown itself. But when these bucaneers decided to relieve Old Nick of his dentistry (Devil's Crown – geddit?) he turned nasty and sent them to a wat'ry grave and eternal oblivion.

That is until some programmer made a computer game of it, so it's shiver me timbers – and not surprising with weather like this – and scrape the barnacles off me bottom, for what 'e' as created is a sort of cutprice *Sorcery* for the HMS Spectrum. It's a game of guiding your portly little diver around shooting up fishes and piratical ghosts and collecting things.

Every time you replace a flashing object with its equivalent you get another gem from the Satanic titfer, and once they're replaced you're home and dry.

You'll need to collect the oxygen bottles unless you want to end up airless and the pistols pack extra ammo so don't neglect them.

Well, it ain't the best graphics I've ever seen, with or without a telescope, and it didn't seem too difficult at first, though it gets more tricky later. But for the price of just two dubloons I reckons it be a jolly bargain, Rover.

John Minson

Mad house

Program *Asylum* **Micro** CBM64/ATARI **Price** £9.95 **Supplier** All American Adventures Unit 10 Parkway Industrial Centre, B/Ham.

Well my friend, it's finally happened, too many late nights solving adventures has turned you into a nervous wreck. Found wondering down a dimly lit street muttering inane statements like "Light the lamp and Drop the Orc" you find yourself, on waking up, in the local Asylum.

It was certainly easy getting in, but how to get out? Well in my case, if I had played this game non-stop for 24 hours, I think I would still have been in there, or possibly in a real Asylum.

I must say that I found this 'adventure' to be totally boring. The object of the game is to escape back to reality, but this game is one vast maze where you simply wander around aimlessly, trying to open countless doors. To try and map the route is impossible, so you tend to find yourself going round in circles.

If you are one of those who love frustrating maze type games then this one is great, good graphics and plenty of walls to bang into but me, well I'll stick to less frustrating adventures.

Roger Garrett

Well played

Program *Tasword 3* **Micro** Spectrum **Price** £18.50 **Supplier** Tasman, Springfield House, Hyde Terrace, Leeds LS2 9LN.

First thing first – three cheers to Tasman Software for having the courage to release this program on microdrive. I have always felt that Sinclair's controversial mass storage system, given decent support, would ultimately come up trumps (my drive and tapes have never let *me* down) and this release shows just what can be achieved with only one drive, let alone seven linked together.

A clear and concise manual comes with the package and is set out in such a way as to make finding a particular section simple, the key to a good word processor – simplicity of use. It's no good having to wade through pages and page of technical jargon to perform a fundamental exercise and *Tasword 3* has been designed to keep such hassles to a minimum. Word wrapping and justification are automatic (they can be turned off if required) and the movement of text left, right or centre is delightfully easy.

Blocks of text can be swapped, copied, inserted or deleted (as can single words) and all can be executed by at most two key presses. The program offers a main menu which is called up by pressing *Stop* and includes files for merging text, printing and tutoring. Any selection from this list will activate the microdrive and load in new data precisely like a standard disc drive operation. Tasman also offer a copy facility and recommend you keep your original and make a back-up which would become your master tape for normal use. This protects your *Tasword* program should a fault occur in your copy.

This package is the best WP release I've seen on the Spectrum and makes a mockery of the claim that the Spectrum is for games only.

Andy Moss



TAROT

by David Muir

This week, the second and final part of the Tarot card listing. The program is fairly straightforward, apart from the graphics

When a card is to be printed, a check is made if it is a suit card. If so, the character 255 is defined for the suit and printed where necessary on the face to make the number of 'pips' or once for a court card as a suit marker If it is a court card then K,Q,N or P is also printed

Trump and court card picture data starts in memory at 36000 There is a short (21-byte) machine code section at 39672. (The data for this is the last line of the program.) This simply uses LDIR to dump 72 bytes from the picture data area into the UDG area to fill out characters 246 to 254 (memory locations 37920 – 37991), prior to printing a string containing these characters (a$).

It is interesting that the screen can be filled with different card pictures while using only 10 user-defined graphic characters in a present string

There is little agreement amongst Tarot card fortune tellers as to the card meanings. I have tried to synthesise ideas from a number of sources, with the prime objective always to keep the program as short as possible Readers can easily substitute their own ideas and expand the meanings Interpretative data begins at line 510 There are two pieces of data for each card starting at 'The Fool' Generally these give 'Good' and 'Bad' meanings . but some cards tend to be totally good or totally bad.

Once again, if all the typing seems beyond your abilities (or patience), then I can supply tape copies of the program at £1 50 each Write to me, David Muir, at 78 Peverell Park Road, Peverell, Plymouth PL3 4ND

```
590 DATA DEFEAT,HUMILIATION,ABANDONED STRUGGLE,LEAVING,TRICKERY,DECEIT,HELPLESSNESS,INDECISION,DESPAIR,MISERY,MATERIAL CALAMITY,DISRUPTION,NEW WEALTH,PRACTICAL PLAN,HARMONIOUS CHANGE,BALANCE,SKILL,CRAFTSMANSHIP,HOARDED WEALTH,MATERIAL GAIN,ROOTLESS
600 DATA UNEMPLOYMENT,REWARD, GENEROUS GIFTS,SPECULATION,INACTIVITY,LEARNING,APPRENTICESHIP,PRUDENCE, SELF-INTEREST,PROPERTY,THE FAMILY,THE FOOL,THE MAGICIAN,THE HIGH PRIESTESS,THE EMPRESS,THE HIEROPHANT,THE EMPEROR,THE LOVERS,THE CHARIOT,STRENGTH
610 DATA THE HERMIT,THE WHEEL OF FORTUNE,JUSTICE,THE HANGED MAN,DEATH,TEMPERANCE,THE DEVIL,THE BLASTED TOWER,THE STAR,THE MOON,THE SUN,LAST JUDGEMENT,THE WORLD
620 DATA WANDS,KING,CUPS,QUEEN,DAGGERS,KNIGHT,SHIELDS,PRINCESS,ACE,TWO,THREE,FOUR,FIVE,SIX,SEVEN,EIGHT,NINE,TEN,BASIS,COVERS,CROSSES,FAR PAST,NEAR PAST,NEAR FUTURE,FAR FUTURE,FEARS,OTHERS FEEL,HOPES,OUTCOME
630 DATA 16,10,18,14,10,15,14,19,4,10,14,2,24,10,32,19,32,13,28,7,32,1
640 SYMBOL  255, 234, 160, 240, 34, 26, 14, 4:RETURN
650 SYMBOL  255, 126, 129, 255, 126, 60, 24, 60:RETURN
660 SYMBOL  255, 3, 5, 74, 116, 80, 120, 159:RETURN
670 SYMBOL  255, 24, 102, 66, 153, 66, 102, 24:RETURN
680 DATA 0,0,0,0,0,0,0,0,4,4,7,7,4,3,4,6,68,236,252,252,12,198,36,228,0,34,85,77,69,65,33,19,4,5,3,4,4,2,133,204,36,36,142,19,97,131,143,63,15,6,2,1,1,3,7,7,60,58,121,249,241,243,243,227,255,255,255,255,255,255,255,255
690 DATA 0,0,0,0,0,0,0,0,4,4,5,4,7,3,4,6,68,238,180,4,248,252,60,252,0,34,89,77,69,65,33,19,4,5,3,6,7,7,134,204,60,60,190,61,253,59,55,127,15,6,2,1,1,3,7,7,60,56,121,249,241,243,243,227,255,255,255,255,255,255,255,255
700 DATA 0,0,0,0,0,0,0,0,4,6,5,4,7,7,4,6,68,238,180,4,252,252,60,236,0,34,89,77,69,65,33,19,4,5,3,2,1,3,135,206,12,24,150,45,219,183,111,223,15,6,2,1,1,3,7,7,60,56,121,249,241,243,243,227,255,255,255,255,255,255,255,255
710 DATA 0,0,0,0,0,0,0,0,4,6,5,3,4,3,4,2,68,236,180,248,4,196,36,228,0,34,89,77,69,65,33,19,5,4,3,2,5,4,133,207,20,18,162,45,209,149,165,203,15,6,2,1,1,3,7,7,60,58,121,249,241,243,243,237,255,255,255,255,255,255,255,255
720 DATA 0,0,0,0,0,0,1,6,0,56,68,108,84,40,255,0,0,0,0,0,48,200,112,192,29,38,24,0,0,0,220,158,199,68,124,127,127,97,97,225,0,0,0,128,128,128,128,192,124,131,225,152,135,136,145,145,192,176,200,4,248,144,63,127,0,0,0,0,0,0,255,255
730 DATA 64,64,248,148,242,81,81,89,0,34,68,108,84,49,215,68,0,4,26,34,92,136,8,8,23,24,0,0,255,192,231,240,41,148,148,130,239,32,246,36,232,24,224,180,255,47,231,15,248,223,207,204,13,13,12,13,0,255,255,130,1,255,198,131,31,251,243,51,40,48,40,48
740 DATA 0,0,12,15,12,13,13,18,56,124,68,109,198,215,239,255,0,0,96,224,96,96,96,224,12,12,8,9,18,20,20,29,238,198,16,57,140,130,190,239,96,96,32,32,144,89,80,112,18,20,44,37,39,39,39,63,56,16,16,215,239,255,255,255,144,80,104,72,200,200,260,248
750 DATA 0,39,57,48,31,32,32,28,200,56,232,240,8,128,136,0,0,0,0,0,0,0,0,0,33,53,45,65,130,43,74,146,112,40,8,48,16,224,64,96,0,0,16,56,18,36,68,130,166,172,243,248,254,255,255,255,48,84,136,63,121,231,159,225,136,130,69,185,144,130,140,240
760 DATA 0,0,0,0,1,1,1,1,36,90,137,133,50,122,122,48,0,0,0,0,128,128,128,128,56,124,236,198,230,115,25,8,177,129,255,129,255,0,129,195,28,62,55,99,103,206,152,16,8,0,0,0,0,0,1,3,102,60,24,60,102,199,129,0,16,0,0,0,0,0,128,192
770 DATA 33,51,63,63,31,16,32,33,8,152,248,248,240,8,232,8,0,0,0,0,0,0,0,0,35,34,33,25,36,66,225,240,40,8,8,112,144,8,8,134,0,16,40,68,68,40,40,40,252,191,191,223,239,236,243,255,112,24,252,243,205,57,249,249,40,40,40,56,196,4,4,252
780 33,51,63,63,31,16,32,33,8,152,248,248,240,8,232,8,0,0,0,0,0,0,0,8,35,34,33,25,36,66,225,240,48,8,8,112,144,8,8,136,0,16,40,68,68,40,40,40,252,191,191,223,239,236,243,255,112,24,252,243,205,57,249,249,40,40,40,36,196,4,4,252
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05,217,246,224,224,224,248,126
820 DATA 31,41,68,124,71,69,69,125,0,128
,192,224,48,25,13,6,0,0,0,0,240,8,132,19
6,1,1,0,24,24,24,24,24,3,132,102,19,20,1
1,12,112,36,36,196,24,112,136,4,4,61,66,
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8,24,56,240,224,128,0,0
840 DATA 0,0,0,15,8,20,20,20,0,20,8,255,
0,8,20,20,0,0,0,248,8,20,20,20,34,34,34,
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4,34,34,65,93,99,63,62,28,0,0,0,0,0,0,0,
42,42,255,28,28,28,28,62,28,0,128,0,0,0,
0,0
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255,255,32,32,112,48,48,63,51,143,66,36,
36,36,36,37,37,37,36,36,36,36,37,48,254,
255,59,63,62,128,255,36,36,36,36,36,36,3
6,164,37,37,36,36,36,36,66,255,189,255,2
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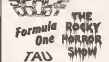
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WILD CARD

by R K Lowry

The term 'wild card' has entered computer jargon from card games. In some of these, the wild card or joker may be used to represent any card in the pack. Similarly, the wild card in computing is a character in a string which means any character from the character set. For example, if the symbol '%' is taken as the wild card, the string 's%n' is equivalent to 'sin', 'sun', 'sen', 's&n' or any other 3-character string in which 's' is the first character and 'n' the 3rd.

The single character wild card, though useful in certain applications, is somewhat limited. A more powerful wild card character is one which is defined as 'one or more characters'. If the character '*' is defined in this manner, the string 's*n' is now equivalent to countless strings. 'soon', 'spleen' and 'spoon' are but three examples.

What use are wild cards? The main application in mainframe operating systems is for convenience of file management. They are particularly useful if the file naming convention makes use of filename extensions, eg. fred.for;5, fred obj,2, fred exe,2. On VAX machines the command 'dele fred *,*' would delete all three of these files which is a lot quicker than typing three separate commands.

At last we come to the QL. The Psion packages create files which have filename extensions. For example, if you save a document called 'fred' from Quill, the file generated is called 'fred_doc'. Consequently, a wild card facility has its uses for many QL owners. The program presented here is a wild card backup program. You type in a string containing wild card characters and the program copies all files which match from mdv1 to mdv2. For example, if you have a cartridge containing a mixture of Quill and Archive files, and wish to copy only the Quill files, the string '*_doc' will do the trick.

The program is a vehicle for the string matching function *wcard*. This is a logical function with two string arguments. The first is a string containing wild cards and the second a string to be matched. If the strings are equivalent within the wild card convention % = any character, * = one or more characters, the function returns '1'. Otherwise it returns zero.

The only limitation on the use of wild card characters is that if the character '*' is used, the wild card characters must be separated by at least one character which is not a wild card.

For example, '%', '*', 'a*', '%a' and '%%' are all valid but '**', 'a*%' and 'f*%d' are invalid.

```
100 REMark **
110 REMark ** Wild card backup (mdv1 to mdv2)
120 REMark ** R.K. Lowry
130 REMark **
140 REMark ** Set up directory
150 REMark **
160 OPEN_NEW #3,mdv2_rklaszat
170 DIR #3,mdv1_
180 OPEN_IN #3,mdv2_rklaszat
190 INPUT#3,a$:a$
200 REMark **
210 REMark ** Input wild card string
220 REMark **
230 CLS:INPUT'Enter filename for backup';a$
240 REMark **
250 REMark **
260 REPeat bkup
270   IF EOF (#3) THEN EXIT bkup
280   INPUT#3,b$
290   IF wcard (a$,b$) THEN
300    PRINT'Copying mdv1_';b$
310    COPY 'mdv1_'&b$ TO 'mdv2_'&b$
320    END IF
330 END REPeat bkup
340 REMark **
350 REMark ** Close down directory
360 REMark **
370 CLOSE#3:DELETE mdv2_rklaszat
380 STOP
390 REMark **
400 REMark ** Logical Function wcard(a$,b$)
410 REMark ** R.K. Lowry 30/12/85
420 REMark ** Compares a string containing
430 REMark ** wildcard characters (a$) with
440 REMark ** an expanded string (b$). The function
450 REMark ** returns 1 if the two strings
460 REMark ** are equivalent. Otherwise 0
470 REMark ** is returned
480 REMark **
490 REMark ** All variables are local
500 REMark **
510 DEFine FuNction wcard (a$,b$)
520 LOCal i,p%,pmax%
530 REMark **
540 REMark ** Test for null strings
550 REMark **
560 IF LEN(a$)=0 OR LEN(b$)=0 THEN RETurn 0
570 p%=1:pmax%=LEN(b$)
580 FOR i=1 TO LEN (a$)
590 IF p%>pmax% THEN RETurn 0
600 REMark **
610 REMark ** Wild card '%'
620 REMark **
630 IF a$(i)='%' THEN
640  p%=p%+1
650  END IF
660 REMark **
670 REMark ** Wild card '*'
680 REMark **
690 IF a$(i)='@' THEN
700  IF i=LEN(a$) THEN RETurn 1
710  p%=p%+1
720  IF p%>pmax% THEN RETurn 0
730 REMark **
740 REMark ** Search for character
750 REMark **following wild card
760 REMark **
770  REPeat csearch
780    IF a$(i+1)=b$(p%) THEN EXIT csearch
790    p%=p%+1
800    IF p%>pmax% THEN RETurn 0
810    END REPeat csearch
820  END IF
830 REMark **
840 REMark ** Character other than wild card
850 REMark **
860 IF a$(i)<>'%' AND a$(i)<>'@' THEN
870  IF a$(i)<>b$(p%) THEN RETurn 0
880  p%=p%+1
890  END IF
900 NEXT i
910 REMark **
920 REMark ** Check for trailing characters
930 REMark ** in b$
940 REMark **
950 IF p%=pmax%+1 THEN RETurn 1:ELSE :RETurn 0
960 END DEFine
```



WILD WEST

by Andy Clarke

Use a joystick in Port One to play this Wild West Shootout. After the titles enter the number of players wishing to play. It helps if there are more than one as this game challenges player against player as each tries to beat the high score.

After all the name entering, you'll receive the message 'Git Ready' and the player's name.

The scene is set in the Wild West and you have to shoot as many Indians as you can in one minute – (change value in Line 58 for a longer session.)

Move up and down the screen to get the Indian. To fire you must face him by knocking the joystick left or right. Then press 'Fire'. Sometimes you'll have to fire more than once to kill an Indian.

When shot the Indian will whoop and disappear, only to reappear on another part of the screen. If you go off the top or bottom of the screen a little routine at Lines 52-54 will make him reappear at the bottom or the top respectively.

You score 100 points per Indian and should be looking for a score of 1200.

```
0 POKE36 40 CLR
1 DIMH$(10) HS$(10) H(10)
2 REM*** GUNFIGHT / CBM 64 ***
3 REM*** BY ANDREW CLARKE ***
4 REM***(C) 1984***************
5 GOSUB300
6 FORS=200TO211 FORT=0TO62 POKES*64+T,0 NEXT NEXT
7 FORT=0TO62 POKE211*64+T 0 IFT=28ORT=31THENPOKE211*64+T,180
9 NEXT
10 FORS=200TO210 FORT=0TO62 READA POKES*64+T,A NEXT NEXT
11 CLR V=53248 POKEV+39,2 POKEV+38,7 POKEV+37,0 POKEV+41,2 POKEV+40,1
12 POKE2040,200 POKE2041,211 GOSUB600 GOSUB204 POKEV+27,15
15 FORT=1TO10 HS(T)=0 HS$(T)="" NEXT
20 POKEV+21 3 POKEV+33 0 POKEV+32 0
22 POKEV,100 Y=100 POKEV+1 Y POKEV+28 5
25 SC=0 R=R+1 IFR>PL+1THENR=0
26 GOSUB200 PRINT"GUNFIGHTER " H$(R) "HIGHEST " HS(1)
30 TI$="000000" GOSUB800 POKE2040 300
40 JS=PEEK(56321)
42 IFJS=254THENGOSUB100 Y=Y-4 S=0 GOSUB570
44 IFJS=253THENGOSUB104 Y=Y-4 S=0 GOSUB570
46 IFJS=247THENPOKE2040 307 K=1
48 IFJS=251THENPOKE2040 305 K=1
50 IFJS=239THENGOTO110
52 IFY>249THENY=29
54 IFY<29THENY=249
56 PRINT"SCORE "SC;" TIME ";MID$(TI$,4,1);":";RIGHT$(TI$,2)
58 IFVAL(TI$)>=100THENGOSUB580 GOTO70
60 POKEV+1 Y POKEHF 0 GOTO40
70 POKE2040 300 GOSUB500 PRINT"" H$(R);" SCORED ";SC GOSUB580
72 GOSUB350 IFZ>1THEN80
74 PRINT"THIS IS THE HIGHEST YET!!"
80 FORT=1TO2000 NEXT
82 PRINT"WEST GUNFIGHTER IS ",HS$(1)
84 PRINT"WITH A SCORE OF ",HS(1)
86 FORT=1TO2000 NEXT IFR<>PTHENRETURN
88 GOTO20
90 POKEV+21,0 PRINT"" M=2 GOSUB300 GOSUB800
92 PRINT"ANOTHER GO?"
94 PRINT"PRESS "FIRE" FOR "YES""
96 PRINT"PRESS "N" FOR "NO""
97 GETA$ IFPEEK(56321)=239THENCLR RESTORE RUN
98 IFA$="N"THENEND
99 GOTO97
100 IFPEEK(2040)=202THENS=203 GOTO100
101 S=202
102 POKE2040,S RETURN
104 IFPEEK(2040)=200THENS=201 GOTO130
105 S=200
130 POKE2040 S RETURN
110 IFK<>1THEN60
112 POKEV+30 0 IFPEEK(2040)=207THENS=206 S=238 GOTO116
114 IFPEEK(2040)=205THENS=204 B=0
116 POKE2040 S IFB=255THENGOTO124
118 POKEV+2 Y+1 GOSUB510 FORD=150TO30STEP-4 POKEV+2,D
120 IF(PEEK(V+30)AND4)=4THEN150
122 NEXT POKE2040 204 GOTO60
124 POKEV+3 Y+1 GOSUB510 FORD=150TO255STEP4
126 IF(PEEK(V+30)AND4)=4THEN150
128 POKEV+2 D NEXT HL=0 HL=PEEK(V+16)
130 POKEV+16 (HL+2) FORD=2TO100STEP4
132 IF(PEEK(V+30)AND4)=4THEN150
134 POKEV+2,D NEXT
136 POKEV+16 0 POKEV+2,0 POKE2040,307 GOTO60
150 GOSUB520 SC=SC+100 FORT=0TO15 GOSUB582
152 POKEV+41,7 NEXT POKEV+41 2
154 GOSUB550
156 POKEV+2,X POKEV+16,0 POKEV+21,3 GOSUB600
158 GOTO60
200 POKE53280 0 POKE53281 2
202 PRINT"                         HERE IS....." RETURN
204 PRINT"" POKE53281 0
206 PRINT""
208 PRINT"  * * *  * ** *** *** * * ***"
210 PRINT"  * * ** * *  * *  ** *"
212 PRINT"  * * **** ** * * *** *"
214 PRINT"  * * * * ** * * * * * * *"
216 PRINT"  *** * * * * *** *** * * *"
218 PRINT"  ***  *"
220 PRINT"  *  **  *"
222 PRINT"  ** **"
224 PRINT"                 ANDY CLARKE (C)1984"
226 FORT=1TO2000 NEXT
228 PRINT"           GUNFIGHT"
230 PRINT"           ----------"
232 PRINT"WHEN OTHER INJUNS HAVE INVADED THE          WEST!"
234 PRINT"I SEEN 'EM WITH MY OWN EYES I TELL Y "
236 PRINT"YOU BETTER GUNFIGHTERS BETTER GET YOUR"
238 PRINT"SIX SHOOTERS READY "
240 PRINT"YOU'VE ONE MINUTE TO GIT AS MANY"
242 PRINT"INJUNS AS YOU CAN "
244 PRINT"HOW MANY OF YOU FELLERS WANT TO"
246 PRINT"PLAY (1-10)" INPUTPL
248 IFPL>10ORPL<1THEN240
247 GOTO244
248 PRINT"HOW GUYS  PUT IN YER NAMES."
250 FORT=1TOPL PRINT"GUNFIGHTER NO.";T  INPUTH$(T)
252 IFLEN(H$(T))>10THENH$(T)=LEFT$(H$(T),10)
254 NEXT RETURN
260 PRINT"GIT READY " H$(R)
262 PRINT"PRESS  FIRE "
264 IFPEEK(56321)=239THENPRINT"" RETURN
266 GOTO264
300 POKE53281 0 PRINT""
302 PRINT"THE HISCORERS"
304 PRINT"  ------------"
306 FORR=1TOPL
308 PRINT" " R "  ";HS$(R);" ";HS(R)
310 NEXT
312 PRINT"PRESS "SPACE" TO GO AGAIN"
314 IFPEEK(197)<>60THEN314
316 PRINT"" POKE53281 0 RETURN
350 FORT=1TO10 GETA$ NEXT Z=0 FORT=1TO10 IFSC>HS(T)THENZ=T T=11
352 NEXTT IFZ=10THEN356
354 FORT=9TOZSTEP-1 HS(T+1)=HS(T) HS$(T+1)=HS$(T) NEXT
356 HS(Z)=SC HS$(Z)=H$(R) RETURN
500 VO=54296 AT=54277 WA=54276
502 HF=54273 LF=54272 SU=54278
504 RETURN
510 GOSUB550
511 POKEAT 15 POKEWA 129
512 FORF=15TO0STEP-1
513 POKEHF 30 POKELF,20
514 POKEVO F NEXT GOSUB550 RETURN
520 GOSUB550 POKEAT 32 POKESU 255 POKEWA,21 POKEHF+14,20 RETURN
522 POKEVO,15 POKEHF,I RETURN
550 FORC=54272TO54296 POKEC 0 NEXT RETURN
570 POKEAT 32 POKESU 255 POKEVO 15 POKEWA,129 POKEHF 100 RETURN
580 GOSUB550 POKEAT 32 POKESU 255 POKEWA 17 POKEHF+14 20 POKEVO,15
582 FORT=1TO100 POKEWA I NEXT GOSUB550 RETURN
590 POKEAT 32 POKESU 255 POKEWA 33 POKEVO 15 POKEHF
    10 FORT=1TO50 NEXT RETURN
600 DX=INT((255-50)*RND(1))+50
602 IFDX>=130ANDDX<=170THEN600
604 IFDX<130THENPOKE2042 208
606 IFDX>130THENPOKE2042 210
608 DY=INT((230+60)*RND(1))+60
610 POKEV+21 7 POKEV+5 DY POKEV+4,DX RETURN
3000 REM COWBOY FRONT #1
3001 DATA0 0 0 0 130 0 0
3002 DATA160 0 10 170,138,0,116
3003 DATA0 0 252 0 0 220 0
3004 DATA0 40 0 1 165 0 5
3005 DATA16 64 20 168 80 40,100
3006 DATA4 0 0 168 0 0 160 0
3007 DATA0 84 0 0 84 0 0
3008 DATA0 0 0 85 0 0 69
3009 DATA0 0 130 160 2 128 0
3010 REM COWBOY FRONT #2
```




```
3011 DATA0,0,0,0,160,0,0
3012 DATA168,0,10,170,128,0,176
3013 DATA0,0,252,0,0,220,0
3014 DATA0,40,0,1,163,0,5
3015 DATA163,64,20,168,30,88,168
3016 DATA48,0,168,0,0,168,0
3017 DATA0,84,0,0,84,0,1
3018 DATA0,0,1,4,0,2,4
3019 DATA0,16,0,0,0,10,0
3020 REM COWBOY BACK # 1
3021 DATA0,0,0,0,160,0,0
3022 DATA168,0,10,170,128,0,168
3023 DATA0,0,160,0,0,236,0
3024 DATA0,40,0,1,163,0,5
3025 DATA163,64,20,168,88,40,168
3026 DATA40,0,168,0,0,160,0
3027 DATA0,84,0,0,84,0,0
3028 DATA65,0,0,65,0,0,98
3029 DATA0,0,160,128,2,128,0
3030 REM COWBOY BACK # 2
3031 DATA0,0,0,0,160,0,0
3032 DATA168,0,10,170,128,0,168
3033 DATA0,0,160,0,0,236,0
3034 DATA0,48,0,1,163,0,5
3035 DATA163,64,20,168,88,40,168
3036 DATA40,0,168,0,0,160,0
3037 DATA0,84,0,0,84,0,1
3038 DATA0,0,1,4,0,2,4
3039 DATA0,10,0,0,0,10,0
3040 REM COWBOY LEFT #1
3041 DATA0,0,0,0,160,0,0
3042 DATA168,0,10,170,128,0,124
3043 DATA0,0,252,0,0,124,0
3044 DATA0,40,0,0,168,0,0
3045 DATA152,0,20,88,0,13,104
3046 DATA0,0,168,0,0,160,0
3047 DATA0,84,0,0,20,0,0
3048 DATA80,0,0,4,0,0,4
3049 DATA0,0,0,0,0,40,0
3050 REM COWBOY LEFT #2
3051 DATA0,0,0,0,160,0,0
3052 DATA168,0,10,170,128,0,124
3053 DATA0,0,252,0,0,124,0
3054 DATA0,40,0,0,160,0,0
3055 DATA152,0,5,152,0,3,80
3056 DATA0,0,168,0,0,168,0
3057 DATA0,84,0,0,20,0,0
3058 DATA0,80,0,0,4,0,0,4
3059 DATA0,0,0,0,0,40,0
3060 REM COWBOY RIGHT #1
3061 DATA0,0,0,0,160,0,0
3062 DATA168,0,10,170,128,0,244
3063 DATA0,0,252,0,0,244,0
3064 DATA0,40,0,0,160,0,0
3065 DATA152,0,0,140,0,0,165
3066 DATA192,0,168,0,0,168,0
3067 DATA0,84,0,0,80,0,0
3068 DATA0,0,0,64,0,0,64
3069 DATA0,0,128,0,0,160,0
3070 REM COWBOY RIGHT #2
3071 DATA0,0,0,0,160,0,0
3072 DATA168,0,10,170,128,0,244
3073 DATA0,0,252,0,0,244,0
3074 DATA0,40,0,0,160,0,0
3075 DATA152,0,0,152,0,0,153
3076 DATA64,0,151,0,0,160,0
3077 DATA0,84,0,0,80,0,0
3078 DATA0,0,0,64,0,0,64
3079 DATA0,0,128,0,0,160,0
3080 REM COWBOY DEAD
3081 DATA0,0,0,0,0,0,0
3082 DATA0,0,0,0,0,0,0
3083 DATA0,0,0,0,0,0,0
3084 DATA0,160,0,0,160,0,10
3085 DATA170,128,0,116,0,48,252
3086 DATA40,20,220,88,5,49,64
3087 DATA1,163,0,0,168,0,0
3088 DATA160,0,0,160,0,0,160
3089 DATA0,128,84,0,160,85,104
30060 REM INDIAN RIGHT
30061 DATA0,192,0,0,64,0,0
30062 DATA64,0,0,168,0,0,244
30063 DATA0,0,252,0,0,244,0
30064 DATA0,48,0,0,168,0,0
30065 DATA152,0,0,152,0,0,152
30066 DATA0,0,104,0,0,160,0
30067 DATA0,84,0,0,80,0,0
30068 DATA0,0,0,64,0,0,64
30069 DATA0,0,128,0,0,160,0
30070 REM INDIAN LEFT
30071 DATA0,12,0,0,4,0,0
30072 DATA4,0,0,168,0,0,124
30073 DATA0,0,252,0,0,124,0
30074 DATA0,40,0,0,168,0,0
30075 DATA152,0,0,152,0,0,152
30076 DATA0,0,104,0,0,160,0
30077 DATA0,84,0,0,20,0,0
30078 DATA20,0,0,4,0,0,4
30079 DATA0,0,0,0,0,40,0
```

PALETTE

by Nic Ford

This week, the instructions for using the Pallete facility installed by last week's code, plus a demo program showing off its major features – remember, the demo program won't run unless you have the code already installed.

As has been said, commands are accessed through the Print statement. In the following descriptions three dots (". . .") represent any other part of the *Print* statement. This can be a string or number to be printed, a print specifier (;, or ') or even another palette command. The descriptions use *n*,*m*,*x*,*y* and *z* as variables. These can be straight numbers, Basic variables or complex mathematical expressions. *x* represents a pen number, and must hold a value between 0 and 15. *y* and *z* are colour numbers, and must lie between 0 and 7. The values of *n* and *m* may vary, and will be noted in the text.

Print . . . ; Paper x; . . . Sets the current paper to the colour from pen *x*.

Print . . . ; Ink x; . . . As above for ink.

Print . . . ; Ink x, y; . . . Sets pen *x* to hold colour *y*. Anything printed after this in *Ink x* or *Paper x* will have colour *y*. Anything on screen printed from pen *x* will change to colour *y*.

Print . . . ; Ink x, y, z; . . . Sets pen *x* to flash between colour *y* and colour *z*. The speed of this flash depends on the flash rate.

Print . . . ; Flash n, m; . . . Sets the flash rate. Any pen set up by *Print . . . ; Ink x, y, z; . . .* will spend *n* fiftieths of a second in colour *y* and then *m* fiftieths in colour *z*. (**Warning:** 0 is counted as 256. *Print . . . ; Flash 1, 1; . . .* is a very fast flash, which can be painful to the eyes and can slow program execution down appreciably.)

The palette can also work for graphics commands. Unfortunately these must also be accessed through the *Print* command. Care has been taken to use combinations of characters not normally used.

Print . . . ; "P̃", n, m; . . . Works the same way as *Plot n, m*

Print . . . ; "D̃", n, m; . . . Works the same way as *Draw n, m*

Print . . . ; "M̃", n, m; . . . A "Move" commands. As . . . ; "P̃", n, m, . . . but the screen is not marked in any way.

If *Attr (n, M)* is used in a program when using the palette it will give a number representing the logical colours on screen at position *n*, *m* at the current time. To find what pens were used to produce this colour a function must be defined thus: 1 *Def Fn p(n, m)=Peek (n*32+m+E3232).*

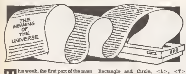
This will give a value with the binary form PPPPIIII. PPPP is the number 0-15 of the *Paper* pen for that position. IIII is a similar number for the *Ink* pen.

The demo program is a quick demonstration of the palette's abilities. It makes use of all of the new commands and shows their syntax in a practical way. It also uses two extra commands – *Print . . . ; CHR$ 0; . . .* and *Print . . . ; Chr$ 1; . . . Chr$ 0* clears the screen and also updates the new attributes file, which *Cls* does not do. *Chr$ 1* scrolls and updates, and should be used in preference to the normal "scroll?" routine, as this can leave strange colour combinations on the screen.

If you feel you cannot type in all that hex, the author can provide a copy of the program. Send a cheque for £3 to Nic Ford, 25 Canada Road, Cobham, Surrey, KT11 2BB.

Listing 3: Spectrum Palette Demo Program

```
10 CLEAR 63231: LOAD "PALETTE"CODE : RANDOMIZE USR 64257
20 REM Delete line 10 if already loaded.
30 BORDER 0: PRINT CHR$ 0; REM clear screen
40 FOR f=0 TO 7: PRINT  INK f,f; INK f+8,f;: NEXT f
50 REM Set colours
60 FOR f=1 TO 15: PRINT TAB 7; INK f;"Ink ";
70 PRINT " " AND f<10;f;" on paper 0": NEXT f
80 REM Use all pens
90 FOR f=0 TO 7: PRINT  INK f+8,f,7-f;: NEXT f
100 REM Set pens 8-15 flashing
110 FOR f=50 TO 25 STEP -5: PRINT  FLASH f,f;: PAUSE f: NEXT f
120 FOR f=25 TO 1 STEP -1: PRINT  FLASH f,f;: PAUSE 2*f: NEXT f
130 REM Use flash.
140 PAUSE 50
150 FOR f=1 TO 30: PRINT  PAPER f-INT (f/16)*16;CHR$ 1;: NEXT f
160 REM Scroll off
170 PRINT  PAPER 0;CHR$ 0;
180 REM Cls again
190 PRINT  INK 4,4; INK 6,6;
200 REM Set pens 4 and 6
210 FOR f=0 TO 175 STEP 5
220 PRINT  INK 4;"~M",f*1.4,0;"~D",255-f*1.4,f;
230 PRINT  INK 6;"~P",0,f;"~D",f*1.4,175-f;
240 NEXT f: REM Demonstrate graphics commands
250 PRINT  FLASH 50,50; INK 0,2,0;
260 FOR f=20 TO 1 STEP -1: PRINT  FLASH f,1;: PAUSE 2*f+2: NEXT f
270 REM Flash again
280 PAUSE 0: PRINT  FLASH 0,0; INK 0,0;: STOP
```



RAINBOW

by Cy Noble

This week, the first part of the main program, plus the start of the detailed instructions. There are three basic modes of operation, the first of which is simply called Free Draw mode.

In this mode you move the special cursor around and if you hold down the fire button a line in the current colour will follow the cursor (In all instructions that follow any reference to 'fire' refers to the CTRL key if using the cursor keys). At all times, the top two lines of the screen display the current option in the current colour and the X, Y coordinates, if the cursor keys are being used If the current colour is Black then the top line will be in flashing White

<A> selects the Alphabetic mode This will print the standard printable characters at the screen cursor position, in whatever colour is current

Shapes mode can only be entered from the Free Draw mode by hitting the letter corresponding to the shape required Once in this mode it can only be exited by hitting <E>xit.

Shapes available are Line, Triangle, Rectangle and Circle, <L>, <T>, <R> and <C> respectively Once a shape is selected you are asked if you want a *"Solid shape? (Y/N)"* This means the shape will be completely coloured in the current colour if you hit <Y> or just an outline if you hit <N>. Once an option is selected the program stays on that option until <E> is hit, whereupon you will be back in Free Draw mode

With each of the shape options you move the cursor to the position required and hit fire. At this point the cursor will be replaced by a flickering dot but as you move the joystick a flashing line will follow your movement. This line marks the position of the coloured line that will appear when you hit fire again, if you had selected <L> (line) The same procedure applies to <C>ircle except that the line will be the (invisible) diameter of the circle drawn with the mid point of the line being the centre. The line can be at any angle so you can place circles exactly where you want.

Filling blank areas – <TAB> will select the fill option from both the Free Draw and Shape modes. Hitting <TAB> refreshes the fill colour blocks on the bottom two lines of the screen You move the cursor to the colour required and hit fire to capture it In the bottom right will be the colour currently under the cursor and you can select another colour from anywhere on the screen where there is colour In the interests of a speedy fill (and also because of memory requirements) this fill routine will not fill *all* of the more complex blank areas unless they are simple convex shapes Bear in mind that the fill starts at the cursor, fills a line of pixels to the right (until it reaches a coloured spot) then similarly going left and then up a line and repeat until it hits a non-blank pixel above the cursor position. Then down in the same manner

You may find it impossible to fill some very small areas which are only one or two pixels wide, but with such, it is possible to use the <L>ine or Free Draw option to finish it

More next week, then Meanwhile, for the faint at heart, I'm supplying the program on various formats – write to me at the address in the listing Cassette (£10), 5¼" Disc (£11.50) or 3" Disc (£15)

```
10REM RAINBOW
20REM By Cy Noble
30REM 323 North Circular Rd.
40REM London N13 5JH
50ONERRORCALLclesc:GOTO290
60HIMEM=&3FFF
70car=W%:alx=B%:col1=C%:col2=D%
80cch1=E%:cch2=F%:getpos=G%
90getpix=H%:show=I%:once=J%
100getp=K%:gate=L%:pixcol=M%
110jst=N%:button=O%
120lx=Q%:ly=R%:apc=&44C:fill=T%
130clear=U%:js=2%:gcol%=?gate
140lcol%=?gate:color%=lcol%
150col$=CHR$12+"This colour:GCOL"
160free$=CHR$12+"Free draw:"
170*FX10
180*FX4,2
190*FX212,128
200*FX213,149
210*FX214,2
220JS=TRUE:VDU12,31,0,10:PRINT"Current option is JOYSTICK: Okay (Y/N)":*FX21,0
230REPEAT:I%=INSTR("NnYy",GET$):UNTILI%>0
240IFI%>2 GOTO270 ELSE JS=FALSE:CLS
250PRINT"<J> toggles between Joystick & Cursors" "When using cursors <CTRL>=fire " "on screen instructions" "Hold down <CTRL> to draw lines" "(Hold down <SHIFT> to move Quickly)" "<SPACE> to continue":X%=640:Y%=512
260REPEATUNTILGET=32
270*FX21,0
280MODE2:VDU23,0,10,%,0;0;0;
290PROCwindows:GCOLgcol%,lcol%:COLOURcolor%
300CALL cas
310gcol%=0:gcol%=0:free%=TRUE
320PROCpflag
330free%=TRUE:flag%=FALSE
340PROCshape
350IFINKEY(-87) PROCshape(1):REM L
360IFINKEY(-36) PROCshape(3):REM T
370IFINKEY(-83) PROCshape(5):REM C
380IFINKEY(-52) PROCshape(7):REM R
390IFINKEY(-97) PROCfinish:REM F
400PROCJS
410IF FX=TRUE DRAWX%,Y%
420IF FX=FALSE PROCplot(X%,Y%)
430GOTO330
440END
450DEFPROCwindows
460VDU24,20,0;1,14,0
470VDU24,0;0;1279;1023;
480ENDPROC
490DEFPROCJS:FX=FALSE
500IF J%=FALSE PROCcursor:ENDPROC
510CALL jstk
520REM X%=?lax+256*?(lax+1)
530REM Y%=?lay+256*?(lay+1)
540IF?button>0 FX=TRUE
550PROCsetvals
560ENDPROC
570DEFPROCsetvals
580IF X%>1279 X%=1279
590IF Y%>959 Y%=959
600IF X%<0 X%=0
610IF Y%<0 Y%=0
620IF I% THEN660
630VDU4 23,1,0;0;0;0;31,0,1
640PRINT;"X=";X%;" Y=";Y%;" ";
650VDU5,23,0,10,%,0;0;0;
660V%=X%/16
670P%=Y%/4-228:W%=ABS(W%)
680ENDPROC
690DEFPROCcursor:QUICK%=0:FX=FALSE
700IF INKEY(-2) FX=TRUE
710IF INKEY(-1) QUICK%=16
720IF INKEY(-58) Y%=Y%+4+QUICK%
730IF INKEY(-42) Y%=Y%-4-QUICK%
740IF INKEY(-122) X%=X%+8+QUICK%
750IF INKEY(-26) X%=X%-8-QUICK%
760PROCsetvals
770ENDPROC
780DEFPROCalpha:LOCALG$:VDU21,7
790PRINT"Letters (Fire exit)";:*FX21,0
800REPEAT:PROCJS:PROCplot(X%,Y%)
810VDU5:G$=INKEY$(5)
820IFG$<>"" MOVEX%-16,Y%+16:PRINTG$:VDU7
830UNTIL I%=TRUE:VDU4,7:FX=FALSE
840MOVEX%,Y%:PROCpflag:ENDPROC
850DEFPROCfinish:VDU7,12
860CALLcas:?apc=-1:?(apc+3)=-1:*FX21,0
870PRINT"Cursor to colour:" "Press fire";
880REPEAT:PROCJS:PROCplot(X%,Y%)
890CALLgetapc:CALLgetpix:CALLshow
900UNTILFX=TRUE:FX=FALSE:?apc=-1
910*FX14,4
920*FX138,0,68
930*FX13,4
940PRINT"Cursor to fill area:Press fire";
950PROCfill:PROCpflag:?(apc+1)=?cch1:?(apc+2)=?cch2:ENDPROC
960DEFPROCplot(x%,y%)
970VDU26,28,0,24,19,0:VDU4:*FX21,0
980GCOL4 lcol%:FORN%=0TO1:*FX19
990MOVEx% 16,y%+16
1000VDU240:NEXT
1010PROCwindows:GCOLgcol%,lcol%
1020VDU5:MOVEx%,y%
1030ENDPROC
1040DEFPROCsave:LOCALI%,I2%,name$
1050CLS:PRINT"Save Load or Quit ?":*FX21,0
1060REPEAT:I%=INSTR("SsLlQq",GET$)
1070UNTILI%>0:IF I%>4 THEN1170
1080INPUT"File name ";name$
1090IFLEN(name$)>7 name$=LEFT$(name$,7)
1100IFI%<3 op$="SAVE " ELSE op$="LOAD "
1110name$=op$+name$
1120PRINTname$" OK? Y/N";:*FX21,0
1130REPEAT:I2%=INSTR("NnYy",GET$)
1140UNTILI2%>0:IF I2%<3 THEN1170
1150IF I%<3 name$=name$+" 3000 7B00"
1160OSCLI name$
1170PROCpflag
1180ENDPROC
1190DEFPROCshape(a%):VDU7,12
1200flag%=TRUE:free%=FALSE
1210LOCAL x1%,y1%,H%,s%,I%,J
1220IFa%=1 THEN1300
```

```
1230PRINT"Solid shapes ? Y/N":*FX21,0
1240REPEAT:I=INSTR("NnYy",GET$)
1250UNTILI>0:IF I>2 s%=s%-1
1260FX=FALSE:PROCdla:*FX21,0
1270IFs%=2 OR s%=3 s%=3 ELSE s%=2
1280shape$=CHR$(240+s%)+" :: point/fire
"
1290PROCflag:PROCgetpoint(s%)
1300IFflag%=TRUE THEN 1240
1310FX=FALSE:free%=TRUE:PROCflag
1320ENDPROC
1330DEFPROCgetpoint(s%):LOCALx1%,y1%
1340REPEAT:PROCkeys:*FX21,0
1350PROCJS:PROCplot(X%,Y%)
1360UNTILFX=TRUE OR aflag%=FALSE
1370IFaflag%=FALSE ENDPROC
1380x1%=X%:y1%=Y%:FX%=FALSE
1390PROCdla
1400REM first point fixed
1410IFs%=5 PROCrect(x1%,y1%,s%):ENDPROC
1420REM get 2nd pt
1430REPEAT:PROCJS:FORM%=0TO1:*FX19
1440PLOT14,x1%,y1%:PLOT14,X%,Y%:*FX19
1450NEXT
1460UNTILFX=TRUE:FX=FALSE
1470IFs%=1 PLOT4,x1%,y1%:PLOT5,X%,Y%:EN
DPROC
1480REM 2nd pt fixed if not triangle
1490REM then fall thru next line
1500IFs%=4 PROCtri(x1%,y1%,s%):ENDPROC
1510PROCcircle(x1%,y1%,s%)
1520ENDPROC
1530DEFPROCtri(x1%,y1%,s%)
1540REM third point to get
1550LOCALx2%,y2%,x3%,y3%
1560x2%=X%:y2%=Y%:PROCdla
1570REPEAT:PROCJS:FORM%=0TO1
1580PLOT14,x1%,y1%:PLOT14,x2%,y2%:PLOT14,X
%,Y%:PLOT14,x1%,y1%:*FX19
1590NEXT
1600UNTILFX=TRUE:x3%=X%:y3%=Y%
1610PLOT4,x1%,y1%
1620IFs%=2 PLOT5,x2%,y2%:PLOT5,x3%,y3%:
PLOT5,x1% y1%:PLOT69,x1%,y1%
1630IFs%=3 MOVEx2%,y2%:MOVEx3%,y3%:PLOT
80,x1%,y1%
1640ENDPROC
1650:
1660DEFPROCrect(x1%,y1%,s%)
1670LOCALxs%,ys%,s1%,rc%
1680REPEAT:PROCJS
1690xs%=X%-x1%:ys%=Y%-y1%:FORM%=0TO1
1700:PLOT4,x1%,y1%:PLOT2,xs%,0:PLOT2,0,
ys%:PLOT2,-xs%,0:PLOT2,0,-ys%:*FX19
1710NEXT:UNTILFX=TRUE:FX=FALSE
1720MOVEx1%,y1%
1730IFs%=6 PLOT1,xs%,0:PLOT1,0,ys%:PLOT1
,-xs%,0:PLOT1,0,-ys%:ENDPROC
1740IFys%<0 st%=-4 ELSE st%=4
1750FORr%=0TO ys% STEP st%:PLOT1,xs%,0
:PLOT0,0,st%:PLOT0,-xs%,0:NEXT
1760ENDPROC
1770:
1780DEFPROCkeys
1790IFINKEY(-70) j%=j% MOD -1:PROCassig
n:PROCtell(assign$)
1800IFINKEY(-35) aflag%=FALSE
1810IFINKEY(-106) PROCsave
1820IFINKEY(-90) CLG:?(spc+1)=?cch1:?(s
pc+2)=?cch2:CALL cms:?cch1=?(spc+1):?cch
2=?(spc+2):CALLshow:PROCflag
1830IFINKEY(-97) PROCflch
1840IFINKEY(-74) CALL fill
1850IFINKEY(-86) PROCalpha
1860IFINKEY(-51) PROCdots(0)
1870IFINKEY(-102) PROCdots(1)
1880IFINKEY(-101) PROCbar(0):PROCtell("
Bars")
1890IFINKEY(-82) PROCbar(1):PROCtell("S
pread")
1900IFINKEY(-86) PROCbar(2):PROCtell("O
pen pattern")
1910IFINKEY(-72) PROCbar(3):PROCtell("R
eset fill colour")
1920*FX15,0
1930col%=?cols:gcol%=?gstu
1940*FX13,4
1950IF agcol%<>gcol% agcol%=gcol%:PRI
NTcol$;BIN$(gcol%);",";S(R$(col%):PROCd
la:PROCflag
1960IFcolor%<>lcol% color%=lcol%:PROCf
lag:ELSE GOTO 1990
1970IFcolor%=0 CLS:PRINT"BLACK: CAREFUL
 !":PROCdla:PROCflag
1980ENDPROC
1990DEFPROCcircle(x1%,y1%,s%)
2000LOCALa%,b%,c%,r%,x,y,d%
2010a%=ABS(X%-x1%)/2:IFX%>x1% a%=a%+x1%
ELSE a%=a%+X%
2020b%=ABS(Y%-y1%)/2:IFY%>y1% b%=b%+y1%
ELSE b%=b%+Y%
2030r%=SQR((ABS(X%-x1%)^2)+(ABS(Y%-y1%
)^2))/2
2040VDU29,a%;b%;:IFr%<16 THEN2070
2050MOVE-10,16:VDU5:IFs%=4 VDU252 ELSE
VDU253
2060VDU4:GOTO2160
2070MOVEr%,0
2080x=r%:y=r%/10:c%=1
2090REPEAT
2100IFs%=4 PLOT85,x,y:MOVE0,0
2110MOVE0,0:PLOT81,x,y
2120x=x-y/10
2130y=y+x/10
2140c%=c%+1
2150UNTILc%>62
2160VDU29,0;0;
2170ENDPROC
2180DEFPROCfinish:LOCALI%
2190CLS:PRINT"Finish ? (Y/N)":*FX21,0
2200REPEAT:I%=INSTR("NnYy",GET$)
2210IFI%<3 PROCflag:ENDPROC
2220*FX12
2230*FX4,0
2240*FX15,0
2250VDU26:CALL...
2260ENDPROC
2270DEFPROCtell(tell$):VDU12,7:*FX...
2280PRINTtell$
2290PROCdla:PROCflag
2300ENDPROC
2310DEFPROCassign
2320IFj%=TRUE assign$="JOYSTICK" ELSE a
ssign$="CURSOR KEYS"
2330ENDPROC
2340DEFPROCdla VDU7:TIME=0
2350REPEATUNTILTIME>100:VDU7:ENDPROC
2360DEFPROCdots(a%):LOCALq%
2370FORq%=0TO4:IFa%=1 THEN2390
2380GCOL0,RND(7)
2390PLOT69,X%-RND(100),Y%-RND(100)
2400PLOT69,X%-RND(100),Y%+RND(100)
2410PLOT69,X%+RND(100),Y%+RND(100)
2420PLOT69,X%+RND(100),Y%-RND(100)
2430NEXT:GCOLgcol%,lcol%
2440ENDPROC
2450DEFPROCflag:gc$="GCOL"+STR$(gcol%)+
",";+STR$(lcol%):VDU12
2460IFfree%=TRUE PRINTfree$;gc$ ELSE af
lag%=TRUE:PRINTshape$;
2470PROCdla
2480ENDPROC
2490DEFPROCbar(a%)
2500IFa%=0 ?cch2=?cch1
2510IFa%=1 ?spc=0
2520IFa%=2 ?(spc+3)=0
2530IFa%=3 ?spc=-1:?cch1=?(spc+1):?cch2
=?(spc+2):?(spc+3)=1
2540CALL show
2550ENDPROC
```

Early Viewdata

Computing networking is so frequently described as 'next year's big growth market', that it may surprise some of you to know that the first viewdata service was set up around ten years ago

This week I'm going to step back from specialised areas, to take a more general look at the development of micro communications

Viewdata was first considered as a possible information providing media in the early and mid 70s Sam Fedida was the 'inventor' of Prestel, or Post Office Viewdata as it was known in the early days

In a way Prestel was a mistake, being the result of a viewphone project, the aim of which was to enable television pictures to be sent over the phone lines, like some science-fiction films

Fedida and his team discovered that the technology of the time was not advanced enough to send anything more than text and simple graphics So it became Viewdata

At that time the Post Office decided that the system was so cheap, and could provide so much information that every home would be able to have a viewdata receiver and it would be used regularly in place of a train time table, encyclopedia or just about any written information.

The Post Office was convinced enough to test the system using 'guinea pigs' They supplied receivers to 50 people and ran a test of the system Comparing today's Viewdata with the early Viewdata, is like comparing an Amiga with a ZX81, or an automatic rifle with a bow and arrow

Early Viewdata was very limited, to keep the costs down, it was black and white, capital letters only and the display was was a limited 32 x 16 The data which could be sent consisted of the numbers one through to nine and zero, a hash and a phone

Early Viewdata used a speed of 1200/75, and this is about the only thing which has survived 100% from early Viewdata

The BBC and the IBA started to look into teletext (Ceefax and Oracle) at the same time as the Post Office looked into Viewdata. They produced this non-interactive (data may be sent only one way) system, and in some ways it was better than Fedida's Viewdata, it used colour, had a screen size of 40 x 24 and could handle lower case characters Also Teletext was 'free' to use, if your television was equipped to pick up the teletext service, which many TVs now are, then you did not have to pay to use the service

The Post Office, was not surprisingly, interested in teletext and discovered that it would be cheaper to make a Viewdata receiver to teletext specifications, so colour, etc, became a part of Prestel

A teletext character set was decided upon, which would contain all of the characters available to both teletext and Viewdata receivers

This is the same as the characters set on the BBC B micro in Mode seven (also called teletext model). This set developed to include double height, graphic and flashing characters.

Sam Fedida's team decided on GEC computers, GEC 4000s were the original computers, GEC 4082s are the present computers and there are plans to develop a system with a mixture of GEC 5066s, GEC 4190 (32 bit) and the extremely powerful GEC 6300 series of computers In the present system, each computer has about 384K Ram with 8 x 70M (1000K) hard discs to hold information 560,000K in all.

The purpose of all this was to enable the computers to handle many calls quickly and respond almost instantaneously 200 calls at one time with a response time of a maximum of two seconds, from receiving the data to acting on it

Computers and multiplexers were set up around the country to enable as many people as possible to receive Prestel at the cost of a local call.

Slow menu

Prestel has been a great success, but in many ways it is not as successful as it was first believed it would be It was predicted that by the end of 1980 there would be 100,000 users, but now, six years later in 1986 there are only about two thirds of that number

One of the reasons for this is that Prestel with Micronet 800 (home computer section) costs over £80 a year *plus* phone calls Many home users cannot afford this Also ex-users of Prestel do not like the slow menu system for finding a page To find a page you have to go through a menu, which takes you to another menu, followed by yet another menu and so it goes on.

A key word searching system for Prestel is said to be in the development stages and should be ready by the end of this year at the latest

Recently home micro users have written software for their micros so that they can run their own systems like Prestel. Running one of these is great fun, you get all the benefits of logging on without the cost of a phone call!

However, Bulletin Boards do cost a bit to set up – about £1000-£2000 – and consequently there are less than 200 in the UK.

The first BBs ran on Tandy TRS-80s, using TBBS software, and some on Ataris (FoReM boards in particular) Now just about any computer from a ZX Spectrum with microdrives, or a BBC B, to a TRS-80 with hard discs, can run a BB

Static screen

Most BBs are not the same as Prestel and require the user to have different software BBs are often monochrome and they transmit a line at a time on a scrolling screen, rather than a page at a time on a static screen, as with Prestel.

Now for this week's BB top 10

Name	Baud rate/format	Number
1 Mailbox-80	300/300	[illegible]
2 [illegible]	300/300	[illegible]
3 [illegible]	300/300 & 1200/75	[illegible]
4 [illegible]	300/300 & 1200/75	[illegible]
5 [illegible]	1200/75 Viewdata	[illegible]
6 [illegible]	1200/75 Viewdata	[illegible]
7 [illegible]	1200/75 Viewdata	[illegible]
8 CBBS – SW	300/300 1200/75 & 1200/75 Viewdata	[illegible]
9 Falcon Board	300/300 & 1200/75	[illegible]
10 Dark Crystal	300/300 & 1200/75	[illegible]

You may wonder why I've dropped the CCCBB (Calne Computer Club Bulletin Board) from the list It's gone because it is now a 'ring back board' and I've been unsuccessful in contacting it recently

If I manage to get through again then you can be sure it will return

Two new FBBS format BBs have appeared recently firstly, Torture Chamber (I don't know why but many FBBS BBs have weird names Torture Chamber, Compost Heap, etc) Torture Chamber runs 24 hours a day and dual baud rate.

It's number is 021-455-1219 and the Sysop's name is Gandalf Sorcerer (aren't they all?)

The second one is Malcomm Systems, again 24 hours a day, dual baud rate It's number is 01-458-9704 and the Sysop's are Malcom Carter and Danny Zargel

Why not give them a try? One thing about FBBS is that it runs on a BBC, so there is often lots of stuff for BBC owners to download, particularly lots of digitised photographs.

David Wallin

If you have any queries, tips or comments to make about any aspect of micro communications, David Wallin would love to hear from you.

Write to him at *Popular Computing Weekly* 12-13 Little Newport Street, London WC2H 7PP

Peek & Poke



Commodore Basic

Mark Thompson of Tullibody, in Scotland, writes

Q Like many others, I've found the Commodore 64's V2 Basic a bit awkward to use. I've now purchased Simons Basic, which has made programming much easier.

However, after receiving a Commodore 64 1520 printer plotter as a present, I have found that the two Simons Basic commands *Copy* and *Hardcopy* would not work with my printer, and not even the two sample programs in the user manual would work.

Also my printer does not work with *Mini Office* I keep getting an I/O error 35 in the word processor program. Can you help?

A The 1520 printer/plotter does not use the device number 4, which Simons Basic assumes you're using. To change the device number, look up page 37 of the *Commodore Programmers' Reference Guide* and all will be revealed.

As for *Mini Office*, I suggest you contact Database Publications itself, 68 Chester Road, Hazel Grove, Stockport (061 456 8383). Your program may be faulty.

Function keys

Mark Elliott, of Workington, in Cumbria, writes.

Q How do you program the function keys on the Commodore 64? In the user guide and the *Programmers' Reference Guide*, there is nothing on this subject.

A The Commodore function keys generate an Ascii code – that code can be looked up on the Ascii code table in the *Programmers' Reference Guide*. To include the function keys in a program, write a *Get A$* routine that looks for the code generated by the function keys.

Bad program

Alan Davies, of Llanelli, writes.

Q I have an Acorn Electron and I am having problems with *Bad Program* messages, when I try to recover a lot of programs, after pressing the *Break* key.

A You should not really use the *Break* key to interrupt a program, *Escape* is much better. *Break* actually causes a "partial system upset".

In order to recover a program after pressing *Break*, the command *Old* should be entered.

Loading problems

Troy Baines, of Blackpool, Lancs writes

Q I originally had a 16K Spectrum but expanded it with memory chips. Sometimes 48K programs load first time, but occasionally they only load second time.

Sometimes I have to put the cassette recorder down on a chair lower than the computer, or programs won't even load the second time around!

A It sounds to me as if you have cassette recorder problems. Have you tried a different recorder? It could well be that it is static from the recorder or TV that is causing the problem.

Try keeping your leads separate, if you can. Try, particularly, to keep the TV aerial lead away from the cassette recorder leads.

Spectrum version

M Sleight, of Doncaster, in South Yorks, writes

Q I can only speak for the Spectrum version of *The Quill*, but I have found no trouble at all in loading a complete adventure into the interpreter.

All one needs to do is load *The Quill* and then proceed as if loading a database. The bytes are loaded as if they were the database.

I know it states on Page 26 of the manual that this is not possible, but it is.

A I've also tried this on the Spectrum and it does work. So I guess it's worth a try.

The Rogue Program

The Rogue Program

THIRD AND MOORE/ARK

Hours have past since they left the wreckage

Rescuers by now, had arrived at the scene and recorded NO SURVIVORS...

Miles from the plane, David begins to lose his Zombie-like stare..........

.....and return to normal. Then without warning he collapses.

GASP

CINDY !

Cindy kept walking...



A masterpiece

Without doubt one of the very best games to have hit the Commodore (and there is a lot of competition for the honour) is Novogen's 3D vector masterpiece *Mercenary*. I was therefore delighted to receive pages full of tips on the game from Christopher Hester of Stockport. Chris writes, "Even though I've solved the game there still remains a lot to do – it's the only game I know that offers a challenge after completion. Here are my tips on how to finish.

"Firstly buy the ship offered at the start and fly over to location 11 13 where you'll find the entrance to a hanger. Use the elevator to descend. Go through the top east door into a green room where you'll find the cheese. This is a most important object as it is a cleverly disguised ship and is also the fastest. Go south until you have picked up the useful armament then back into the hanger. Leave your own ship behind the drop the cheese, then board it. You will now need to fly to each of the hangers and explore them for objects hidden in the rooms below. The beauty of the cheese is that you can pick it up, unlike your old ship, and hence take it with you.

"The hangers are all connected underground but in some devious ways. You will need to know firstly that in the underground rooms below each hanger are a variety of doors. The normal door is a rectangle and can be opened by walking straight up to it. However, there are a variety of shaped doors such as a triangular door which can only be used if you have a key which is the exact shape of the door. There are seven different keys to collect. The doors with a triangle on them are always dark – use a photon emitter to see in them.

"The door with two diagonals is the door to a transmission room which is always seen as a black room with coloured lines. Upon entering you will hear an eerie sound and you have been transmitted to another place on the map. Stepping out of the room shows you where. These doors are immensely complex as usually they alternate between two rooms – step back in and you'll be back where you started – however, some rooms act as transmission points for several different rooms depending on where you've come from. It is a good idea to try and follow these doors as one of the hangers can only be reached (initially) by them.

"The doors with one diagonal across them serve also as transmission rooms, but they are one way only. The ones with a line from the top right corner to the bottom left are the entrances and work like the normal transmission rooms. However, they lead to doors the opposite way round and with a diagonal from top left. These are exits only and if entered they do nothing.

"The doors with a skull and crossbones are Risk doors – usually they are a trap, but one is the entrance to a hanger. Always save your position before attempting to enter one.

"The doors with an arrow pointing up or down are lifts and can only be found in the colony craft that orbits above the city at 65,000 feet. The ship you start with cannot reach the colony craft which is seen as a dot in the sky from the ground but the cheese can easily fly up to it.

"The colony craft must be visited so that you can make use of several objects that are there. Upon entering certain rooms you will be asked to drop a certain object if you are carrying it and you will gain credits. When you have enough credits you can buy a ship that enables you to escape from the planet which is the object of the game. This isn't the only way to complete the game, however – more on this later.

"In the colony craft you will find a five sided key – this is very useful as, if you have all the other keys, you will never need to fly up to the craft again. The key will give you access to a series of rooms below the city including several transmission rooms. One of these takes you straight to the colony craft, therefore saving you a lot of time and effort.

"The reverse facility is also provided. The door in the laboratory of the craft which has a skull and cross-bones on it leads back down to the city.

"The pass enables you to enter the hanger at 3 15 from above, but it is found next to the hanger so you have to use the transmission room first to get it.

"These are the hangers: Blue 3 00, Yellow 3.15 (need pass to enter), Brown 9.05, Red 9:06, Orange 11 13, Yellow 91 35, Grey ** **.

"The last two hangers are not misprints – their locations are outside the city in the wastelands. At first the last one is very difficult to reach as it is not even numbered – the location that just shows asterisks. But don't worry, you can reach it from the other hanger underground.

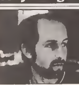
"The intergalactic craft is the one for which the craft is needed. You can rent this craft, or just take it, but to make it work yourself you need the Novadrive. It is obvious from the list that the cheese is the best ship to use." We'll carry on with these tips next week.

Tony Kendle

Ship	Top Land Speed	Top Air Speed
8 08 Dominion Dart	1650	4950
3·00 Palyar Diamond	1650	1650
, Jet	828	7400
11,13 Cheese	3300	9900
9·08 Land Dart	3837	—
12,13 Car	886	—
3 15 Intergalactic craft	—	Escape velocity

Object name	Place to use or how to use
Poweramp	Boost speed of dominion craft
Catering provisions	Kitchens
Gold	Exchequer
Essential 12939 supply	Conference room
Mechanoid	Interview room
Medical supplies	Infirmary
Data bank	Control room
Winchester	Laboratory
Neutron fuel	Engine room
Antenna	Communications room
Energy crystal	Mechanoid power room
Large box	Stores
Photon emitter	This is a torch – use in dark rooms
Anti arms bomb	Stops you destroying buildings
Antigrav	Enables you to carry any object even ships that were previously too heavy
Sights	Give you sights
Metal detector	Shows which buildings belong to which race by colour and information panel. Blue = mechanoid. Green = Palyar. Red = free

Tony Bridge's Adventure Corner



Press reaction

It's been interesting to watch the reaction of the computer press to *Lord of The Rings* over the last few weeks – comments have ranged from the rather predictable "fan-mega-tastic, the greatest thing since *The Hobbit*" to total silence.

My initial reaction was "oh dear", and I'm afraid that nothing that I've seen since has changed my mind – however, it's interesting to see the opinions of other adventurers.

I mentioned Linda Wright's *GAC*'d adventure recently. I've enjoyed playing it and found an eye to detail and some puzzles to warm the old adventurer's heart. Linda tells me that she has forwarded it to Incentive, so I hope that we can see it commercially available soon – I believe Linda has a great future as an adventure writer. But she also has some comments about *Lord of The Rings*:

"I loaded it enthusiastically, waited for what seemed ages, only to have it crash within minutes of starting. For example, under the high hedge, without a source of light and trying to go west, provokes half a message and then the necessity to reload. However, I do like the atmosphere, though the length of 'thinking time' required is niggling . . . and the pictures do little other than annoy. Why can't Melbourne House bring out games like those from Level 9 – I've never had trouble with games from the latter, and it's a shame, as Melbourne Houses's ideas are so good."

Alan Davis, a valued reader and critic of the Elf's witterings but best known to the world at large as the author of the fantastic *Runestone*, has several things to say:

"I was bowled over by this for the first few days of playing – the spirit of the book seems to have been captured so well, and it was so easy to identify with Frodo, Pippin, or whichever character was chosen. There's no doubting that this program (or programs) is a major achievement, and yet . . . slight doubts are creeping in.

"In one or two places in Part One, the game departs from the original, for example, on entering the barrow just east of Tom Bombadil's house, one finds oneself first in an underground shed and then in a room listening to "heavy orc music", neither of which makes sense even in the context of the game and certainly not even remotely in keeping with the spirit of the book.

"The same is true of the "watery tart" which appears in the lake when Merry goes for a swim.

"On the plus side, Part Two seems completely free of lapses of this sort and indeed there are moments when the player really seems to be "living" the book. The exhilarating ride across the ford and the frenzied skirmish with the tentacle outside the Gate of Moria are obvious examples.

"The combat sequences are splendid – there's a feeling of real desperation when trying to fend off the band of Orcs by Balin's tomb.

Sight-seeing tour

"There's a feeling of real tragedy to be had, too. Taking the blizzard-torn pass through the mountains of Lothlorien, you find yourself almost in tears as your faithful companions keel over one by one, because you didn't get the fire going quickly enough.

"Alas, Part Two is relatively easy to finish, and looking back, there does seem to be a dearth of actual things to do – it's really more of a sight-seeing tour. Somehow, I doubt that this is a game which can be played over and over again in the way that *The Hobbit* could. Maybe time will prove me wrong."

Other readers have mentioned *LOR* – Hugh Walker (scourge of critics and a scourge of a critic) has, as usual, some very perceptive remarks to make, for example: "The ride to the Ford. Glorfindel revealed (in retrospect) in all his glory as an Elf-Lord . . . where is it? Melbourne House couldn't find enough in the book and so has to add a monastery?" and more.

I have tried and tried over the past two or three months to get to gripe with *Lord of The Rings*: believe me, I desperately want to see in the adventure what I have been told by others actually exists – I've been told, for example, that "the atmosphere of the book has been captured extremely well" and that "the puzzles are enormously difficult and intriguing" and so on.

Poetry and pathos

But to me, this is all totally unfounded. In my review in The Corner, I said that "*LOR* is better than many adventures" but as I have been able to see more of the programs, I believe that this is far too generous.

The *Lord of The Rings* trilogy is the greatest work of fantasy ever put to paper – the combination of scholarship, dedication to detail and sheer breadth of imagination is breathtaking.

No adventure game could ever hope to come near to matching the poetry and pathos of Tolkien's work, and we shouldn't expect miracles of Melbourne House – but this is no excuse for foisting on the public such a badly conceived, badly programmed piece of rubbish as *Lord of The Rings*.

Why should we have to put up with glacial response times, and such awful puns as "heavy Orc music" – very funny, yes, but couldn't the programmers show some restraint?

The programs are inconsistent: at the start of part two, try going south, then west. Through the stone door, you'll find the Mithril shirt – but you could also go S,S,S,S,S,S, etc, then west and achieve exactly the same result. This is atmosphere?

No atmosphere

I have to admit that I was seduced at first by the lengthy location descriptions, but these do not make for atmosphere. Why should we have to put up with the stupid loading arrangements, which lead half the reviewers and much of the public to complain of "corrupted tapes" – why does my program *New* itself when I *Quit*?

Why do Melbourne House and Philip Mitchell seem to be unable to learn from the lessons of modern adventure programming – why is there no Ramsave as in many of the better modern games . . . ?

Despite anything that I might say, the game immediately went to the top of the charts and will remain there for many months.

Of course, everybody will buy the thing, but the thought that gnaws away at the back of my mind is: "Never again will anyone, anywhere, have the chance of bringing Tolkien's beautifully-crafted work to the computer".

Perhaps Melbourne House should take a look at Fergus McNeil's *Bored of The Rings* if they would like to see how a true enthusiast and brilliant programmer approaches the task.

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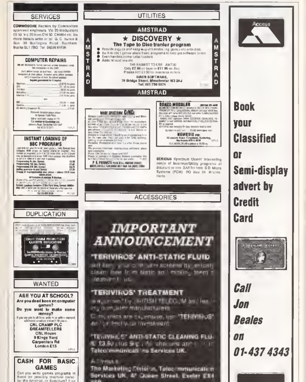
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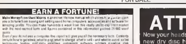
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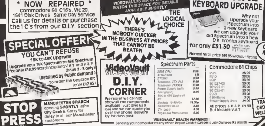
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New Releases

RIGHT NOISES

Bonk ... dit ... bonk dit ... bonk ... dit ... bonk ... bonk ... bonk ... Table tennis is like that – the noise of plastic against plywood can become hypnotic. *Ping Pong* from Imagine makes most of the right noises but I'm not sure it adds up to much of a game.

Ping Pong the computer game is an attempt to implement the classic 'duel between the Chinese and everybody else' on the home micro. I have some doubts about its effectiveness. The bat moves have been simplified to smash/backhand/forehand cut and drive, ie the general position and height of the bat is controlled by the computer. Whilst this makes for an easier game in the earlier stages, it effectively limits the skill to guessing shot styles rather than quick positioning.

The graphics are fair, no actual players, which gives a better view of the table – each side is represented only by a ghostly hand and bat suspended in mid air. At the first level it is possible to beat the computer quite easily by mixed cut and slam shots. Each point is greeted by a burst of noise from the crowd that sounds like seagulls screeching – perhaps it's because the crowd, depicted on-screen, consists of monkeys (don't ask me why; this game is licensed from a Japanese software company).

One additional criticism: between points you have to wait an awfully long time before the point is registered and you are ready to play on. It gets very irritating.

Not dross by any means and of interest to those already hooked on the real thing but I don't think it has all that much lasting addictiveness.

Program *Ping Pong*
Price *£8.95*
Micro *Commodore 64*
Supplier *Imagine*
6 Central Street
Manchester
M2 5NS

FUMBLE

Superbowl ... the glamour ... the excitement ... the NFL approval ... the disappointment.

On loading *Superbowl* offers one and two player options – and as the majority of owners spend most of the time playing one player, I tried that.

You then move to a 50/50 split screen, with a portion of

Pick of the week

HEAVY DUNGEON

Gargoyle Games may have cracked one of the most difficult markets of all with *Heavy on the Magick* – Dungeons and Dragons addicts. Whilst its popularity assumed that quite a few computer adventure games are derived from the D & D genre, in fact, none of them have really captured the scope, flexibility, imagination of the original format. Much less brought something new to it.

Heavy on the Magick is unlike any other computer game I've seen, though adventurers of every kind should have no problem becoming completely obsessed with it. Call it a graphically animated role-playing adventure.

This being a Gargoyle product things are not absolutely po-faced (thankfully). Indeed, the entire game is based around the premise that you, Axil, have committed one of the great magical faux pas of all time – telling dodgy stories about ace sorcerer Therion without realising he was listening.

You are banished to one of the most unpleasant dungeons ever – the stagnant pits beneath the tedious castle known as Collodon's Pile. You can bet your last pixie invocation that the dungeons are chock full of some of the nastiest astral beings ever.

You are alloted, in true luck of the dice tradition, values for stamina, skill and luck. These values alter as you overcome obstacles, survive and do battle. The whole basis for the game is combat by spells – which come in various sorts, but where there is a visual result, eg, animating an inanimate object, it actually happens on screen.

Spells must be used with caution though. Get it wrong and you could find that you have produced some very nasty objects indeed.

Instructions are issued via single keypress commands or speaking directly to whomever or whatever you wish to question. Some

This Week

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Robin of Sherlock	Ad	Amstrad	£7.95	CRL
Computer Hits 2	Arc	Amstrad	£9.95	Beau Jolly
Ping Pong	S	Amstrad	£8.95	Imagine
The Pawn	Ad	Atari St	£24.95	Rainbird
Computer Hits 2	Arc	BBC	£9.95	Beau – Jolly
O Grade SCEEB Chemistry	Ed	BBC	£8.00	AVP Computing
O Level LEB Chemistry	Ed	BBC	£8.00	AVP Computing
Nerve	Ed	BBC	£8.00	AVP Computing
O Grade SCEEB Physics	Ed	BBC	£8.96	AVP Computing
O Level JMB Biology	Ed	BBC	£8.00	AVP Computing
O Level JMB Chemistry	Ed	BBC	£8.00	AVP Computing
O Level JMB Physics	Ed	BBC	£8.00	AVP Computing
O Level LEB Biology	Ed	BBC	£8.00	AVP Computing
O Level LEB Physics	Ed	BBC	£8.00	AVP Computing
Sex Determination	Ed	BBC	£12.00	AVP Computing
Teeth	Ed	BBC	£12.00	AVP Computing
Chip Factory	Arc	C16	£6.95	Audiogenic
Fairlight	Ad	Commodore 64	£9.95	Softek
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Discom 64	Ut	Commodore 64	£14.99	Initiative Managers
Computer Hits 2	Arc	Electron	£9.95	Beau – Jolly
3D Clock Chess	B	PCW 8256	£19.95	CP Software
Computer Hits 2	Arc	Spectrum	£9.95	Beau – Jolly
Max Headroom	Arc	Spectrum	£9.95	Quicksilva
Who Dares Wins II	Arc	Spectrum	£8.95	Alligata
Ping Pong	S	Spectrum	£7.95	Imagine

New Releases

DATE

of the monsters are vaguely helpful and can offer advice Early on in the game you'll meet the giant Apex who seems relatively harmless, unless, being large and clumsy, he happens to tread on your foot, at which point Axil leaps up and down in pain in one of the nicest sections of animation I've ever seen in any computer game

The graphics are unusual, a sort of teletext level of resolution, but impressive nevertheless – the saving in memory achieved explains how Gargoyle have managed to get so many animated actions in such a large adventure (250 rooms)

Despite being trodden on by assorted monsters half a dozen times, *Magick* has me hooked It has more genuinely original ideas than any game I've seen since *Knight Lore* and should sell by the lorry load. The game is released in mid April so start saving

Program *Heavy on the Magick*
Price *£9 95*
Micro *Spectrum*
Supplier *Gargoyle Games*
74 King Street
Dudley
West Midlands
DY2 8QB

the playfield on the right, and a scoreboard/action replay command board on the left. The first thing that strikes you is that the playfield is very small indeed – with all 22 players represented as tiny pixels Still

The action is controlled via a series of neat menus, by which you can select authentic play options, both offensive and defensive, go through a play frame by frame, and select preferred receivers And then the action starts – bang – what happened? Well, to get NFL approval, players have to move at realistic scale speeds – and when you're talking about a few pixels on screen, that's too fast Still, you get used to that (almost) after a bit . . and then you discover the problem. Tracking 22 players on screen is a time consuming business for a microprocessor So it hasn't got time to be clever So you can score from a rushing play about seven times out of ten – not so authentic

An even jollier wheeze is to carry the ball around in circles, while the rest of the players run after you – again, not too realistic The computer offense is easily beaten, when you've clocked up over one hundred, your score goes back to zero (I managed to lose, despite being 87 points ahead) – need I go on.

The two player game is acceptable, given strong reservations about the play area size and speed, but tell that to Spectrum and Amstrad owners with only one joystick port. For a game marketed with one and two player options, this is just not good enough.

Program *Superbowl*
Price *£9 95*
Micro *Spectrum, CBM 64, Amstrad to follow*
Supplier *Ocean Software*
6 Central Street
Manchester

HIDDEN TALENT

The PCW 8256 is, of course, a lot more than a word processor It runs CP/M programs of any kind and by using the Ram disc can often run them a lot faster than almost any other CP/M machine The other point is that it has a surprisingly high screen resolution and can do pretty nifty black and white graphics

Proof of the potential of the PCW 8256 arrives in the form of *3D Clock Chess*, a superb chess program which features an edge-on view on the board, *à la Psion Chess* for the QL The playing pieces are as large and detailed. The program actually goes beyond *Psion Chess* by also featuring on screen timing of moves, displayed both as digital and analogue information, ie, two clock faces drawn in perspective, which tick away the time taken by each side. Most impressive.

In the end chess programs come down to playing ability – a difficult thing to assess without many weeks spent battling with it. All I can say is that with the machine set to five second moves and we in the office taking as long as we liked, it won hands down.

The display also indicated certain technical information about what moves the computer is considering, how 'deep' it is looking in its tree of moves, and how the computer rates its own position. There are options to get the computer to suggest a move and review previous moves if you wish.

The only criticism I can make of *3D Clock Chess* is that you can't take back moves you immediately regret and you can't cancel move instructions you start to type in, but realise are wrong – you have to type a complete illegal move instead. These are niggles though. The program is generally excellent and may come as a big surprise to those who assumed that the PCW 8256 is only a dull business machine

Program *3D Clock Chess*
Price *£19 95*
Micro *PCW 8256*
Supplier *CP Software*
15 Despard Road
London N19 5NP

This Week

Datahits	Ut Spectrum	£4.95	Mupados

Key Ad – adventure S – strategy-simulation
Arc – arcade Ut – Utility Ed – Education

AVP Computing, Hocher Hill House, Chepstow, Gwent WP6 5ER, 02912 5429 **Alligata,** 1 Orange Street Sheffield S1 4DW 0742 755796 **Audiogenic,** 39 Sutton Industrial Park, London Road Reding Berks 1AZ, 0734 664646 **Beau – Jolly,** 19A New Broadway Ealing, London, W5 5AW 01-587 9710 **Bubble Bus,** 87 High Street Tonbridge, Kent TN9 1RX 0732 355962. **CP Software,** 10 Alexandra Road, Harrogate, N Yorkshire HG1 5JS **CRL,** CRL House, 9 Kings yard Carpenter s Road London E15 2HD 01 533 2918 **Imagine,** Imagine Software 6 Central Street, Manchester M2 5NS **Initiative Managers,** 96 worcester Road Malvern, Worcestershire WR14 1NY **Mupados,** Unit 11, Llambed Industrial Estate, Tregaron Road, Lampeter, Dyfed SA48 8LT 0570 422877 **Quicksilva,** Palmerston Park House, 13 Palmerston Road Southampton Hampshire SO1 1LL 0703 20169 **Reinbird,** Wellington House Upper St Martins Lane, London **Softek,** 12/13 Henrietta Street Covent GArden Lon-

Computing in schools

During a visit to an open evening at a local Middle school last year, I took the opportunity to ask one of its governors about the extent to which microcomputers were being used in the school. His reply was not totally unexpected.

The school possessed two microcomputers, but, in his opinion, members of staff were not sufficiently competent in their use, nor was it particularly feasible sharing two machines between more than 400 pupils, so their incorporation into lessons was rare

A small number of children were given time on them, after hours, in the school computing club, but, as all parents know from the teachers' dispute, extra-curricular activities in most schools have been curtailed for the past year, so pupils have had little or no instruction on the machines

This particular situation can hardly be isolated, I am sure that there have been similar occurrences elsewhere in the country

Where schools do have machines available, some pupils are able to learn programming and problem-solving techniques, especially where Logo is employed, but, unfortunately, schools like this are in the minority.

My local First school has recently purchased two microcomputers and hopes to add a third. At least one teacher has had specialist training in their operation and the machines are used as much as possible.

The children, who are aged between five years and eight years, are now familiar with microcomputers and enjoy using them.

I agree that, in their eyes, they are only playing games, but at that age, the playing of games is part of the learning process Used this way, the microcomputer is a genuine teaching aid and I applaud the school and others like it for placing such importance in their use in primary education.

Unfortunately, when children move on to Middle schools, the continuity is not always maintained, microcomputers are used haphazardly or not at all. Much of the good work started in the First school is undone

Secondary schools do not help the situation either Most of their microcomputers are concentrated in one area. Pupils rarely get the opportunity to use them until they are in the fourth year, and only then if they have been successful in obtaining a place on the appropriate CSE or GCE computing course

If schoolchildren are to be kept well-informed, as they must be, then radical changes will have to take place in the educational system as we know it. A microcomputer should be as common place in the classroom as the blackboard is! I cannot think of any subject in the curriculum which would not benefit from it.

Learning about computers and their uses should be a continuous process from the First school onwards, so that, when they come to leave school, teenagers are as familiar with a microcomputer as they are with a pencil and paper

Teenagers who have not had the opportunity to learn computing in class, have, up to now, been able to enrol at an ITEC centre upon leaving school. However, these centres have now had their funding reduced by the government, so, yet again, fewer places are available.

I feel that now is the time for industry to start sponsoring courses in Information Technology, up and down the country, both for their existing staff and for prospective employees In this way, educational continuity will be maintained.

It is not enough for schools merely to have computers – they should be fully integrated into the school curriculum. The money must be found to train all teachers in their use – not just those in the computing department. To fail to find the money now will be the worst kind of waste for the future

Keith Irving

Puzzle No 202

Portbury, Quenching and Riddle are three villages connected by three perfectly straight roads each road being an exact number of miles in length.

If I start at any of the three villages and travel to one of the others by the shortest route, the number of miles that I cover is a prime number On the other hand, if I take the longer route – that is via the third village – the total mileage is just one mile *more* than a prime number Furthermore, the total mileage of the round trip of all three villages is (perhaps not surprisingly) also prime!

Can you determine the smallest possible distances involved?

Solution to Puzzle No 197

The single gold sphere is 28 cubits in diameter When recast the four smaller spheres will measure 10, 14, 18, and 20 cubits in diameter

As the ratio of the volumes of spheres is proportional to the cubes of their diameters, it is necessary to find sets of four integers, the sum of whose cubes is also a perfect cube.

```
10 FOR H=6 TO 24
20 FOR C=3 TO H-1
30 FOR B=2 TO C-1
40 FOR A=1 TO B-1
50 LET T=A*A*A+B*B*B+C*C*C+H*H*H
60 LET CR=T^(1/3)
70 IF ABS(CR-INT(CR))<1E-5 THEN PRINT A,B C H
80 NEXT A
90 NEXT B
100 NEXT C
110 LET H=H+1
120 GOTO 20
```

In the program '*H*' is the largest of the smaller spheres, and '*C*', '*B*' and '*A*', the other three '*T*' represents their total volume, and if the cube root of this is integral, the results are printed

There are a number of sets of values that are printed but it is necessary to find four sets that all produce the same total The smallest total found is shown to be 28 which must be the diameter of the original sphere (and the king's age) This can be split into spheres of (2 10 14, and 24) (3, 18, 17 and 21) (8 11, 19, and 21), or (10 14, 18, and 20) units diameter

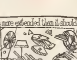
Winner of Puzzle No 197

The winner is Nigel Parsons of Orchard Place, Cardiff, who will be receiving £10

Rules

The closing date for Puzzle 202 is April 28

The Hackers






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